ABRIDGED REPORT OF THE

Address in Therapeutics,

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"MR. PRESIDENT AND GENTLEMEN,—I may acknowledge a confidence, which grows with my years, in the power we can exercise over the processes of disease, and an unwavering belief that therapeutics has laws which are discoverable; that these laws are correlated with the laws of chemistry and physics, and that, sooner or later, therapeutics will enter the circle of the sciences. I shall do what in me lies to lay before you therapeutics from the point of view of science. I need scarcely say that therapeutics must always belong to the order of applied sciences, and will bear much the same relation to physiology in an extended sense as engineering to mathematics. When we say that therapeutics will take rank among the sciences, we mean that therapeutic facts and phenomena will be referred to physical and chemical laws, or, in other words, will be capable of explanation on chemical and physical grounds. In vital phenomena, different as they are from the phenomena of non-living things, there is no suspension or reversal of physical and chemical laws, but only change of the conditions under which they operate; there is no modification of atomic or molecular affinities, but these affinities have a wider and more varied field of action. Now, therapeutics must be essentially inductive, and must proceed by observation and experiment. But we are at once met by this difficulty, that there is no constancy in our results. A given drug will have apparently a quite different effect on different men, and on the same man at different times. The very ground of induction seems to be cut from under our feet. It does not follow, however, that there is any real inconstancy in the action of the medicaments. The relation between the drug and the organism is always the same, but the conditions of the organism vary, and we have no command over the conditions, and no means of recognising variations which may have a determining influence on the action of the substance administered. Such variations were illustrated by referring to the amount of food in the process of digestion, or to the various conditions of the vascular system. The action of drugs on herbivorous animals must be very different from that on the carnivoræ, whose food contains no starch or sugar. The result of experiments, therefore, made on rabbits do not necessarily apply to cats and dogs, or to human beings, and the different digestive capabilities and natural inclination for different kinds of food in different individuals is suggestive of peptic and hepatic chemistry in one approaching the herbivorous, in another the carnivorous type. This line of reasoning might be pursued indefinitely. For example, the functional endowments of the highest nervous centres vary so greatly in different classes of animals that the nerve-cells of these centres must have different degrees of stability and energy, and must react with differing readiness and vigour to stimuli of various kinds. It is interesting to note that no such difference is observed in poisons which act on the lowest centre, the spinal cord. Strychnine acts alike on all animals which have a spinal cord, from the frog up to man. When, however, we leave the vertebrate series even strychnine ceases to be deadly, and black beetles consume with impunity the poisons containing this substance laid for rats and mice. So at least I am informed by an eminent chemist, who tried by means of strychnine to exterminate the cockroaches which infested his kitchen. In the investigation of this subject we must look, therefore, for aid from the general laws of chemical and physical science, taking them as guides for investigation and in explaining processes and results. They are great lights let down into our darkness. This is exactly what has been done in all sciences.

"If therapeutics is to be in any true sense scientific, all the great generalisations of chemical and physical science must apply to the action of remedies, all physiological processes and therapeutical action should be capable of explanation on chemical and physical grounds, and should be capable of expression in the terms of chemical and physical science. Some even of those who think on the subject are disposed to look upon such effects as the action of quinine in ague, the effects of opium in relieving pain, the influence of mercury on syphilitic affections, the purgative action of jalap or elaterium, and the irritation of the skin produced by mustard or cantharides, as ultimate facts which depend upon some relation between the substance and the organism as inscrutable as the affinity of hydrogen for oxygen, into which therefore it is useless to inquire. By therapeutics we mean all those measures by which we combat and endeavour to subdue disease, and if we ask what would fulfil the conditions of therapeutics as a science, the answer would be, a complete knowledge of the processes of disease on the one hand and of the mode of action of remedies on the other. The idea which has guided me is one which I arrived at when I first began to lecture on medicine twenty years ago. It is an application of Herbert Spencer's definition of life. This great philosopher, after a long discussion, enunciates the following as conveying the broadest and most simple definition of life: 'The adjustment of internal relations to external relations.' Life is defined as a process, you will observe, not as an essence or as a force. Put briefly, life is the continuous adjustment of an organism to its surroundings. A living organism is subjected to influences which, were it not living, would tend to its disintegration, but by its reaction it turns to its own advantage these external forces, and employs them in building up its structures.

"With this conception before our minds our definition of health and disease is clear. We have health when the adjustment is efficient and complete; disease when it falls short. Health not being an identical state of things in different constitutions and under different conditions, still less has disease, caused by the same name, necessarily the same significance. The conception of disease, again, gives further extension to the fact, with which we are all familiar, that not every departure from normal action must be considered to be disease, and combated as such. Again, looking upon life as a sort of conflict between the organism and the forces outside, we can see that the disturbing influence of incident causes of disease will vary with the vigour of the organism. What has been said of the organism as a whole applies, *mutatis mutandis*, to the separate organs of the body and to the individual cells of each organ. There is a continuous adjustment of the cell or organ to its environment, which, when exactly performed, constitutes its health, and if imperfectly effected is disease; the environment of cell being of course the blood, or rather the exudation from the blood into the inter-textural spaces. With such a view of the organ and its environment before our minds, it becomes evident that disease may result either from the violence of the incident disturbance, or from faulty reaction on the part of the organism. Now, this will correspond very closely, though by no means absolutely, with acute and chronic disease.

"A question of another kind arises with regard to the specific fevers. How far does the definite series of changes which constitute the disease represent the successive phases of the life history of the microbe? or in what degree is the febrile disturbance reactive or defensive? Is there any shred of truth in the old notion that the end and object of the febrile process is to eliminate a poison which has gained access into the system? I cannot discuss these questions; to do this adequately would require all the time at my disposal, and more. I may just say in passing that the enormous increase of the specific poison during the disease, taken in connexion with the fact that no such increased multiplication of specific micro-organisms takes place in the system in health, is clear evidence of the causal relation between the active multiplication of microbes and the symptoms, probably through the medium of ptomaines produced by the microbes. But what I wish to point out is this, that the object or aim of our treatment will be different according as we endeavour (1) to destroy the specific germs, or control and check their multiplication; or (2) to aid or regulate a defensive reaction or process of adjustment; or (3) to promote a process of elimination. Our power of intervening actively for the benefit of the patient would be greatest if we could destroy the microbes; but there is no evidence as yet that this can be accomplished.

"With questions such as these just indicated in our minds, we do not blindly interfere with everything which we recognise as wrong. We bear in mind the fact that acute disease has a limited duration, and that if the structural injury of important organs can be prevented, and tendencies to death can be counteracted, there will be a return to health. Our success in this endeavour will, of course, be measured by our knowledge of the particular disease, and our judgment in applying it. We try to estimate the significance of each departure from the normal operations of the system, and we aid or counteract it according as it makes for recovery or tends to death. When, again, the nervous system loses control over the temperature and hyperpyrexia sets in, if we mean to save the patient we must recall the organism to its senses by the cold bath; and here it is not merely abstraction of heat, but a powerful impression on the nervous system which is required, and a violent drenching with ice-cold water and an ice-cold enema will be effectual when a graduated bath will be utterly useless. I need hardly remind my hearers that antipyretic drugs are of no avail in such an emergency, and in typhoid fever I have seen nothing but harm from their continuous employment. These wonderful antipyretics, which are ultimately destined to render great service, not merely in the treatment of disease, but—when we know their exact mode of action—by throwing light on the heat-forming and heat-regulating processes in the body, are in the meantime doing harm as well as good. They afford an easy triumph to the medical man, and he may persuade himself as well as the sufferer and his friends that the diminished febrile heat is a step towards recovery, when the remedy may not only lower the temperature but depress the patient. While, however, I deprecate the indiscriminate employment of antipyrin and its congeners, I must not omit to mention that at the outset of pneumonia, given early and in repeated doses, it sometimes appears to cut short the attack. The opportunity is soon after the rigors and long before the development of physical sign. I have seen this in old people in whom an attack of pneumonia must have been fatal. In warm-blooded animals the maintenance of the temperature of the body constitutes the great demand for blood and tissue oxidation. A given temperature is a necessary condition for the due performance of all their nervous functions, and in all classes of animals heat exercises great influence on the organic processes. Heat is the great intermediary through which the molecular motion, which we call chemical action, becomes appreciable to our senses and available for our use. It is the mode of motion through which the force stored up in fuel is transmitted into mechanical energy by our steam engines and into electrical energy by the dynamo, and thus back into that mightiest of all forms of energy—light, the creative power which, through the vegetable organism, shakes loose the atoms of CO_2, water and ammonia, and builds them up into organic compounds. Were there time, it might be shown that diseases also may be ranged under two heads—those characterised mainly by abnormal evolution of energy, and those characterised primarily by perverted nutritional activity. It may be pointed out again, in passing, that our organic remedies influence, for the most part, the evolution of energy, and our inorganic remedies the nutritional processes.

"The aim of therapeutics is to restore the rupture of the normal relations between the organism and its environment. We can only act through the environment of the cells. What we have to do is to make some change in the influences which tend to harm. This may be done by merely changing the patient's surroundings or diet. It seems to me foolish to minimise the value of remedial agents of this class. We have no doubt whatever as to the lethal power of the poisons. There is no question as to the purgative action of certain substances, and if we cannot turn such properties to profitable account it can only be from want of skill. To deprecate the use of drugs simply because our knowledge of their action is vague and imperfect, and because, therefore, we are liable to make mistakes, is to shirk our duty. What we ought to do is to render our knowledge definite. No work is more valuable than experimental investigation of the action of drugs. To mention only one illustration, with how much greater confidence do we employ digitalis and remedies of this class since such investigation has taught us that they are not cardiac sedatives, but that by their action on the cardio-vascular muscular fibres they increase at the same time the vigour of the cardiac systole and the tone of the arteriole walls."

The lecturer referred to the prodigious labours which were being spent in the investigation of the subject, more especially at Cambridge and Edinburgh. He proceeded as follows:—"From all sides there was a convergence of light and effort upon experimental medicine. But this did not meet all the difficulties. What could be more important or more definite than the knowledge that some substances, such as curare, muscarin, and belladonna produce their characteristic effects by action on the nerve endings; while morphine acts on the cerebral cortex and strychnine on the motor cells of the anterior cornua of the cord? Or what more clear and interesting than the modification of the action of the alcohol series by the changes in the radical molecule? But with regard to the action of curare, belladonna, morphine, strychnine, and digitalis, while our knowledge is in many respects definite it is still only mediate. We may know precisely the part of the nervous system on which they act, and their effects, but we do now know how the effects are produced. It is to this we must ultimately get down, and it is this which will be found to be a fact of chemistry. The explanation would come through deductions from the great general principles of chemical and physical science taken as guides for investigation. Let us follow for a moment one or two of such deductions. We have accepted as a starting-point the postulate that all physiological action and all therapeutical action comes under chemical laws. This being so (*a*) the physiological and therapeutical effects of drugs must be identical in their nature, and any apparent differences must be due to changes of conditions existing in disease. The effects of small and large doses of the same medicament, again, often apparently diverse or even opposite, must be alike capable of explanation by the chemical relation between the substance and the organism. This last conclusion will present no difficulty when we reflect upon the illustrations of the varying results of the reaction between two substances according to concentration and other conditions which are presented by the simplest chemical experiment. Strong sulphuric acid, for example, will char and destroy starch, while, diluted, it changes it into glucose; (*b*) substances having similar chemical constitution must have similar physiological and therapeutical action, or, if not, the diversity must be capable of explanation on chemical grounds; (*c*) there must be a quantitative relation between the drug and its effects and a dynamic explanation of such effects. Nothing more need be said with regard to the first of these deductions. Of the truth of the second, 'that substances having similar chemical constitution must have similar physiological and therapeutical action,' every chemical series is an illustration. Just as the ethers and alcohols are gaseous, liquid, or solid, according to the size of the radical molecule, there are corresponding differences in their physiological effects. Their action is speedy and fugitive or slow and durable, according as they enter the blood readily and escape quickly, or are slowly absorbed and gradually excreted. Their influence is obviously related to the oxygen-carrying function of the hæmoglobin with which they interfere in varying degree according as they are, from their physical and chemical properties, capable of replacing oxygen in the corpuscles. When they cease to be volatile they are inert.

"Another interesting illustration of the definite modification of physiological action by change of a given kind in the molecule of the substance administered has recently been brought to my notice by Dr. W. Hunter, who has himself already made his mark in medical science. There are three substances—xanthin, theobromine, and caffeine—which differ from each other in the substitution of methyl (CH_3) for hydrogen in the xanthin molecule: in theobromine two atoms of hydrogen have been replaced by methyl; in caffeine three; one is dimethyl xanthin, the other trimethyl xanthin. Professor Wilhelm Filehne of Erlangen, recognising in this series an opportunity for testing the relation between chemical constitution and physiological action, obtained the following results: In frogs xanthin has two distinct effects: it renders the muscles rigid by direct action on their substance, and it exerts a paralysing influence on the spinal cord. Dimethyl xanthin (theobromine) and trimethyl xanthin (caffeine) have exactly similar effects, but in a minor degree, and caffeine is less powerful than theobromine. A larger dose of theobromine than of xanthin is

required to produce the same effects on the cord, and a still larger dose of caffeine. The rigidity, again, is less marked and the heart muscle is not affected by the two others as it is by xanthin. No doubt, if a mono-methyl xanthin exists, its effects will be intermediate between those of xanthin and theobromine. The addition of methyl groups (CH_3) to the nitrogen atoms of the xanthin molecule has the effect of diminishing both the tetanising action on the muscles and the paralysing action on the cord. To Drs. Crum Brown and Fraser belongs, so far as I know, the honour of leading the way in researches of this kind. I see with pleasure that they have been resumed and extended by Dr. Ralph Stockman and Mr. Dott, who have made known their results in a valuable report to the Scientific Grants Committee of the Association only published last week.

"The most remarkable inorganic chemical group, considered with reference to the physiological relations of its members, is the phosphorus, arsenic, antimony, and bismuth series. Therapeutically and physiologically there is a striking similarity in their action which becomes rapidly less powerful as we ascend the scale of atomic weight, due allowance being made for a possible multiplication of the effects of arsenic, as pointed out by Dr. Odling. In the forms of anæmia, neurasthenia, and neuralgia, in which arsenic is useful, phosphorus is also beneficial, as may be antimony in a less degree. In some cases of neuralgia, especially spinal and enteralgic, phosphorus is of the greatest service. In the treatment of skin disease of the dry and scaly character, again, phosphorus may replace arsenic; antimony is apparently more useful in eczema. The general similarity in the action of antimony is obscured by its emetic property, which is probably a collateral action. This is a mere speculation of mine, but I am interested to see that Dr. Stockman and Mr. Dott have come to a similar conclusion with regard to apomorphine. Bismuth is inert in consequence of the insolubility of its compounds and the feebleness of its affinities. A striking point is the minuteness of the fatal dose, which is comparable to that of the powerful alkaloids, especially taken in connexion with the fact that the effects are not produced by action on a nerve centre, but by the general irritation of the gastro-intestinal mucous membrane which is set up, and, what is still more remarkable, by rapidly inducing a granular degeneration of the liver cells and of other structures. A preposterous and almost childish prejudice against phosphorus has been entertained on the ground of this degeneration produced by poisonous doses. A poisonous dose of the mineral acids produces the same effects, but we are not therefore afraid of employing them as tonics."

Dr. Broadbent further illustrated this branch of his subject by alluding to the arsenic and the mercury groups. "Mercury is in all its forms a deadly foe to minute organisms of every kind, vegetable as well as animal, contrasting in this respect with arsenic and antimony. No set of bodies can be more clearly related chemically than the chlorine, bromine, and iodine group, and yet there is nothing in the action of the chlorides and bromides comparable to the action of iodide of potassium on gummata and other tertiary syphilitic lesions. The explanation of this diversity by Professor Odling in his Gulstonian Lectures was like the lifting of a cloud from before my mental vision. It is no doubt familiar to all my hearers. The iodine acts like chlorine in bleaching; by its affinity for hydrogen it liberates oxygen, which in the nascent state oxidises the organic matter, and the reason why iodide of potassium is available as a vehicle for iodine is that the hold of iodine on potassium is so slight that the combination is easily broken in the presence of living protoplasm, and the iodine is set free to do its oxidising work. Chlorides and bromides are too stable to allow of this decomposition. An explanation of the special action of bromides in preventing epileptic attacks is greatly to be desired. I do not believe that it resides in any specific property of bromine, and I should not be surprised to learn that chloride of potassium had some analogous effect, unless, indeed, it is the displacement of chlorides of sodium and potassium by heavier bromides in the nerve elements which hampers their action and dulls their sensibility. I have long held the opinion that, in addition to the horizontal classification of metallic substances, there will be found a vertical arrangement, a member of each class corresponding with a particular member of the several classes above it from the alkalies through the earths and baser metals up to the noble metals. I should conjecture, for example, that lead at one end may correspond with sodium at the other, and gold (or perhaps mercury) with potassium. Such speculations as these, however, are premature, and at present perhaps unprofitable. The third of the deductions made is that there must be quantitative relation between the substance administered and the effects observed, and a dynamic explanation of such effects. The establishment of any quantitative relation between a substance introduced into the human system and the observed effects seems to be a hopeless task in view of the minuteness of the dose of the powerful poisons, and yet it must be done if therapeutics, or even physiology, is to be correlated with physical and chemical science. When we reflect that a single grain of anhydrous hydrocyanic acid or of aconitine or strychnine will destroy life, and try to calculate the proportion of the deadly agent present in the blood as it arrives at the nervous centre upon which it works destruction, the disproportion between cause and effect is bewildering to the imagination, even if we adopt the supposition of accumulation of the poison in a given part of the nervous system. One is tempted to think that the mode in which they act may best be illustrated by such a case as the presence of grease on the rails in front of a locomotive, when the engine, were the steam turned on, would for want of hold tear itself to pieces, or by grit among the wheels of a piece of machinery, which would bring it to a standstill. Here are effects altogether disproportionate to the cause, and to which the doctrine of the correlation of forces does not at first sight seem to apply. In a sense the illustration is just. CO, for example, combining with the hæmoglobin of the corpuscles and preventing the interchange of oxygen, and CO_2 may not inaptly be compared to grit in the wheels; and the suspension of function of a part of the nervous system which is essential to life, or the allowing of a vital centre to expend its energy and run down, may perhaps present some sort of parallel to the damage of a valve in a steam engine, or the self-destruction of a locomotive when the wheels do not bite. Or there might be a liberation of stored-up energies, as the touching of a button launches a vessel, or the pulling of a trigger determines the explosion of gunpowder. But these illustrations cannot be accepted as indicating an explanation of the apparently disproportionate effects of poisonous doses of the alkaloids. There must be some dynamic action on the part of such drugs—some evolution of energy which interferes with the evolution of nervous energy, or antagonises it; that is, there must be chemical change and dislocation of the constituent parts of the molecule, and this chemical change must be equivalent in amount, and probably opposite in character, to the chemical change which evolves nerve energy. This, if true, is a far-reaching conclusion. It shows that the quantivalence of nerve force is exceedingly small, and, again, that there is some definite relation between the chemical constitution of the poisonous alkaloids and that of the substances contained in the nerve cells, by change in which nerve force is liberated. Many other considerations go to show that nerve force is characterised by intensity rather than quantity, and that its electrical analogue is frictional rather than galvanic, so that I have been led to the conclusion that the nervous impulse which determines muscular contraction is not the transmission of energy, but the disturbances of equilibrium.

"The sudden evolution of nerve force shows it to be of the nature of an explosion, and this implies chemical tension in the molecule which yields it. The atoms, were they free to follow their affinities, would arrange themselves differently, just as in nitro-glycerine the carbon and hydrogen are held apart from the oxygen by nitrogen, and rush together with explosive violence when concussion shakes loose the unstable NO compounds. The absolute necessity of duly oxygenated blood for the functional activity of nerve centres shows that oxygen from outside the unstable nervous molecule takes part directly and immediately in the decomposition and recomposition which liberates nerve force. The active nerve poisons should hypothetically, also, be so constituted as to be in a state of chemical tension, and, as far as my knowledge, now very imperfect, extends, they are all of the nitrite type of molecule, which is an extreme departure from the ammonium type, in which the affinities of nitrogen and hydrogen are balanced. Successive atoms of hydrogen are abstracted, till in amides we have NH_2 instead of NH_4, and in imides NH, and in nitrites N only. This leaves unsatisfied affinity and unbalanced forces which imply chemical

tension. The analogy or the contrast of the chemical constitution of the molecule from which nerve force is evolved, and of the molecule of the poison by which nerve force is antagonised, ought to be full of instruction. It has always seemed to me, if a dynamic explanation of the action of poisons is possible—and such an explanation is a scientific necessity—it should be yielded by prussic acid. Its composition and its constitution are simple. Dynamic change can only have one result—the separation of its atoms; and one tendency—deoxidation, in consequence of the seizure of oxygen by the carbon and hydrogen. The hypothesis which commends itself to my mind, and which I have many times propounded, is that in the presence of the affinities which evolve nerve force the dislocating influence of nitrogen comes into play; the molecule explodes and its carbon and hydrogen seize upon the oxygen which is necessary to nerve action, and a vital nerve centre is thrown out of gear long enough to destroy life.

"This is a thrice-told tale, and I crave your indulgence in once more repeating it. May I also trespass on your patience in again alluding to the fact which presented itself when I was experimenting with this substance—namely, that prussic acid is not a poison to frogs in the same way that it is to warm-blooded animals. When I dropped dilute hydrocyanic acid upon a frog's back, except that it seemed to sting him, he took no notice of it unless he were put under a glass shade, when he would gradually become narcotised, but would recover in the open air. When I injected it under his skin he hopped about as if nothing had happened, until again I placed him in a confined atmosphere, when both he and his companions were gradually narcotised, showing that he was impregnated with the poison. My interpretation of this immunity is that the languid affinities concerned in the evolution of nerve force in batrachians fail to bring about the explosion of the hydrogenic moleculæ."

The lecturer traced the history of therapeutics, and touched upon their more recent developments. He spoke of "therapeutic purpose"—the guiding idea present to the mind in every case under treatment. He condemned the charlatan whose aim was merely to produce conspicuous effects regardless of consequences. He thought that such a purpose ought to have reference to the morbid process which constitutes the disease, and not merely to conspicuous manifestations.

In conclusion, the lecturer said: "One more protest I must raise—it is against the rage for new drugs which seems to have taken possession of the profession. This is absolutely fatal to accuracy of observation and precision in treatment. When the action of a remedy has been worked out by such a man as Professor Fraser, we welcome it at once, as was the case with strophanthus, and the entire medical world owes him a debt of gratitude; but when the drugs are recommended simply by an advertising chemist, it is humiliating to see their statements command general acceptance. Podophyllin is said to act on the liver, and so is calomel, but can anyone who has given a moment's serious thought to the subject, or who has observed closely the effects of his treatment, suppose that a dose of podophyllin is the equivalent of a dose of calomel? I often wonder what we should have said if, having podophyllin and iridin and cascara, we had discovered rhubarb and aloes and senna. Am I not right in my conjecture that they are most ready to fly to new medicaments who have the least knowledge how to use the old and tried ones? May I take the dangerous liberty of indicating the points of my diagnosis of a weak medical man? They are indiscriminate administration of stimulants in fever, a ready resort to narcotics and sedatives, treatment directed to symptoms only, and a fondness for new drugs with high-sounding names."

REVERSAL OF A VERDICT AGAINST A HOSPITAL SURGEON.—Some time ago a hospital surgeon at Liège was cast in heavy damages—10,000 fr.,—in consequence of the somewhat unsatisfactory result of an operation performed on a child. The ground of the action was not that there had been any lack of care or skill, but that the operation had been performed without the consent of the child's father. The Court of Appeal has just heard the case and given its decision, which is contrary to that of the Court below, so that the defendant has at last had judgment pronounced in his favour.

THE DEFORMITIES WHICH DEVELOP IN YOUNG LIFE.[1]

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GENTLEMEN,—In these lectures I propose to treat briefly of the causation, pathology, and treatment of the deformities, both simple and rachitic, which develop during young life. I must ask you to accept the following fundamental laws as true, each of which is capable of absolute demonstration, and I will refer you to various papers for evidence of them.

1. Not only do the forms of the bones of the human adult skeleton vary with such movements as are performed habitually, or with such routine attitudes as are assumed by the vigorous individual, but also do the details of the structure and the functions of the several joints.[2]

2. If an individual is habitually engaged in performing a certain movement or sequence of movements of activity, the form of the skeleton varies from the normal in a degree which is proportionate to the length of the period during which the movement has been performed and to the amount of energy expended in the act. During a single performance of the attitude of activity there are present numerous tendencies for the bones and joints to undergo changes in form. The constant repetition enables the tendencies to become actualities. The earliest variation from the normal consists in the fixation of the physiological attitude which is normally assumed during the performance of such a movement of activity, while the later changes are exaggerations of the same attitude due to changes in the bones and in the intervening soft structures. In other words, the peculiar character of the anatomy of the labourer is, first, the fixation, and subsequently the exaggeration of a normal physiological attitude of activity.[3]

3. For the so-called normal condition of the skeleton it is necessary that during growing life the individual shall combine attitudes with activity with attitudes of rest, and that the attitudes of activity as well as those of rest be varied in character. By an attitude of rest is meant a position in which the superjacent weight is transmitted through a joint or joints with a minimum of expenditure of muscular energy, the form of the bones and the ligaments sustaining the chief strain, the muscles in many cases performing only the passive function of a ligament.

4. During the period of a single assumption of an attitude of rest there exist tendencies to change both in the form of the bones and of the joints.

5. In the young subject the rate of growth of any portion of an epiphysial line varies inversely as the amount of pressure it transmits. In other words, if one half of an epiphysial line transmits habitually an amount of pressure which is greater than normal, the amount of bone which it develops is correspondingly less than that normally produced. If, on the contrary, the other half of the epiphysial line is subjected habitually to a subnormal pressure, the amount of bone developed by it is proportionately greater than the normal. In all the resting postures the mechanism of the skeleton is such that one portion of a growing line is exposed to an abnormal amount of pressure, while another portion is exposed to a much less or even subnormal amount of pressure. The frequent assumption of a single attitude of rest, not corrected by suitable variations in the attitudes

[1] Being a Summary of two Clinical Lectures delivered at Guy's Hospital during the summer session.

[2] The Result produced upon the Muscles, Bones, and Ligaments by the Habitual Exercise of Excessive Strain. (British Medical Journal, Dec. 1st, 1888.)

[3] For illustrations and instances of these and the following conditions I would refer to the following papers: Three Forms of Spinal Deformity (Med. Chir. Trans., 1884); A Remarkable Example of the Manner in which Pressure Changes in the Skeleton may Reveal the Labour History of the Individual (Journal of Anat. and Phys., April, 1887); The Anatomy and Physiology of the Shoemaker (Journal of Anat. and Phys., July, 1888); The Causation of several Variations and Congenital Abnormalities in the Human Skeleton (Journal of Anat. and Phys., July, 1887); Can the Existence of a Tendency to Change in the Form of the Skeleton of the Parents result in the Actuality of that Change in the Offspring? (Journal of Anat and Phys., Jan., 1888).

of activity and rest, results finally in a progressive alteration in the form and function of the bones and joints. The soft parts intervening between portions of bone which habitually transmit an abnormal amount of pressure first become thinned and fibrous, and later may be completely removed. If the bones move freely upon one another the exposed osseous surfaces become dense and eburnated, but if very little movement takes place the opposing surfaces of bone may unite. It is obvious that when these changes have advanced to any extent they cannot be obliterated by treatment, the original form of the skeleton being lost for ever. This law has a most important bearing on the evolution and treatment of acquired deformities.

6. The more vigorous and robust the child, the less likely is he to assume attitudes of rest for any time, while the feeble bodied and frail is but little disposed to expend his scanty muscular power in activity, but prefers to assume such easy postures as make as little demand as possible upon his store of energy.

7. The particular variety of resting posture varies to some extent with the age of the individual and with his surroundings.

8. The density of the osseous system, together with the firmness and fit of the joints, vary directly with the muscular development and vigour of the individual.

9. The rate of growth of bone in an epiphysial line is influenced more rapidly by abnormal pressure in the feeble and atonic than in the vigorous and robust. This is still more marked in exaggerated conditions of malnutrition, as, for instance, rickets.

10. In the non-rachitic child, however feeble he may be, the diaphyses of the bones do not change their form materially other than by the abnormal rate of growth of the epiphysial lines.

11. In the rachitic besides a still further exaggeration of the varied rate of growth of the epiphysial line consequent upon habitual assumption of resting postures, the diaphyses yield to the tendencies to undergo change in form in proportion to the degree of rickets present.

12. If the easy erect posture with the legs extended be assumed, the pelvis is over-extended upon the femora, the facet on the upper surface of the sacrum is inclined backwards, the lumbar and cervical convexities are diminished, while the dorsal concavity is much increased. If this attitude be assumed constantly and for a long period of time, typical dorsal excurvation results. Each vertebra rotates around a transverse axis, compression changes ensue in the anterior segments of the fibro-cartilages and epiphysial lines, and both the bodies and fibro-cartilages become wedge-shaped. In a marked case some nutation of the promontory of the sacrum ensues, the anterior surface becoming more concave and the conjugate of the brim of the pelvis diminished.[4]

13. If the easy erect posture be assumed, the individual standing on one leg, usually the right, the other knee being kept bent, the pelvis is rotated around two axes. It is over-extended upon the right femur, so moving around a transverse axis. At the same time it is fixed in a position of extreme adduction upon that bone, so moving around an anterior posterior axis. The result of this double movement is that the plane of the sacral facet moves around an oblique axis intermediate between these, its surface being made to look backwards and to the left. Each of the superjacent vertebral discs rotates around a similar oblique axis, the degree of obliquity varying with the locality, since the presence of the ribs and the relation of the bony to the fibro-cartilaginous discs determines the formation not of one single curve in an oblique plane, but of three curves in what are practically two planes. Since the axis around which each body moves is an oblique one, the apex of the spinous process does not deviate from the middle line to an extent which at all approaches the deviation of the centre of the body of each vertebra. Consequently the leverage action exerted by the transverse process and bodies of the vertebræ in the dorsal region produces the remarkable alteration in the form of the thorax with which we are so familiar. For the same reason as in dorsal excurvation we sometimes observe a conjugate diminution of the brim of the true pelvis.[5]

14. The ankle-joint permits only of movement around a transverse axis.[6] For the foot there exist two positions—one of activity or of adduction of the foot upon the astragalus, and the other of rest or of abduction of the foot upon this bone. In abduction the tibialis posticus muscle is relaxed, and exerts little more than the inelastic function of a ligament. The tuberosity of the scaphoid descends, the bone rotating around an antero-posterior axis, and unwinding the spiral fibres of the superior internal and the inferior calcaneo-scaphoid ligaments,[7] and increasing the interval between the sustentaculum tali and scaphoid. The os calcis is in this manner permitted to glide outwards beneath the astragalus, the head of which rests upon and exerts a passive pressure upon the *apparently* elongated calcaneo-scaphoid capsule. I would particularly call attention to the anatomy and physiology of this ligament, since it was by an ignorance of the normal anatomy of the foot that the most absurd explanations of the causation and pathology of flat foot have been put forward. Simultaneously with the above changes, the convexities on the articular surfaces of the os calcis and cuboid occupy the bottoms of the corresponding concavities, the oblique fibres of the short plantar ligament become more longitudinal, the outer arch descends, and the two plantar ligaments become tense. In an advanced condition of flat foot, the abduction of the os calcis causes the fibula to come in contact, and later to form a joint with its outer surface.

15. If the active erect posture be assumed, and a plumb line be dropped through the head of the femur, it will be seen to fall much outside the centre of the joint. If the easy erect posture be assumed, and the weight of the leg be supported upon one leg, the total weight of the body falls upon the knee-joint through a point in a transverse vertical plane, which is still more external to the centre of the joint. If this posture be habitually adopted, the outer portion of the growing lines of the femur and tibia form bone more slowly than normal, while their inner segments form it more rapidly. Consequently the internal condyle becomes longer and the outer shorter than in the normal skeleton. As the external femoro-tibial angle diminishes, the patella is displaced further and further outwards till finally it rests on the outer surface of the external condyle in the most advanced condition of knock-knee.

16. In the erect posture when the leg is extended a plumb line dropped from the head of the femur falls in front of the transverse axis of rotation of the knee-joint, so that during the assumption of such an attitude the anterior segments of the epiphysial lines of the femur and tibia transmit more pressure than do the posterior. The habitual exercise of this pressure results in a deformity called "back-knee." This may exist alone; but, as one would expect, it is usually associated with a diminution of the external femoro-tibial angle as knock-knee.

17. As the rickety child assumes the sedentary posture the thorax is flexed abruptly upon the lumbar spine, and the lumbo-sacral and sacro-iliac joints are in a position of very considerable flexion. The constant assumption of this attitude results in the eleventh and twelfth dorsal and the first and second lumbar vertebral bodies assuming a wedge shape, an angular curvature of more or less abruptness resulting. The sacrum yields around a transverse axis, and the posterior portions of the iliac bones are displaced forwards, producing a considerable diminution of the conjugate diameter of the brim of the true pelvis, and its peculiar transversely oval form. This deformity is sometimes spoken of as rickety spine or kyphosis, or as dorsal excurvation of infancy. A similar, though very much slighter, degree of deformity may develop in the non-rachitic under the same mechanical influences.

18. When knock-knee develops in a rachitic subject the

[4] I have discussed the causation of this important deformity of the female pelvis in a paper in the Transactions of the Obstetrical Society, 1887: "The Factors which determine the variations in the form of the Male and Female Pelvis." And in the Journal of Anatomy, October, 1887: "An important factor in the causation of some of the curves which develop in mollites ossium, rickets, and osteitis deformans."

[5] For a fuller description I would refer to a recent paper in the Transactions of the Medico-Chirurgical Society, 1889: The Causation and Pathology of the more commonly observed forms of Lateral Curvature of the Spinal Column.

[6] The Movements of the Ankle-joint, Journal of Anat. and Phys., April, 1888.

[7] The anatomy and physiology of the foot are described in detail in a section of a paper in the Guy's Hospital Reports, 1886, 1887, p. 252, "Flat-Foot or Spurious Talipes Valgus," and the ligaments are illustrated diagrammatically both in adduction and abduction of the foot in a paper on Acquired Deformities in the Brit. Med. Jour., Jan. 23rd, 1889.

changes in the adjacent ends of the tibia and femur are associated with a yielding of the shafts of these bones, so that they together form a fairly uniform curve with its convexity directed inwards. If the development of the knock-knee be preceded by the deformity of the pelvis already described, there exists in the erect posture, owing to a hyper-extension of the hip-joints, a necessary flexion of the knee-joints. Under these circumstances the plane in which the curve formed by the femur and tibia lies runs obliquely inwards and forwards, and not directly inwards.

19. Bow-legs are developed only in the rickety subject,[8] and at a much earlier period than the deformity just described. It depends upon a yielding of the softened diaphyses of the femur and tibia separately, and to some extent independently of one another, and in a vertical transverse plane during the period that the child is learning to stand. The epiphysial lines are not markedly modified in the rates of growth of their several segments till the child has acquired the habit of standing and walking. Then they react to abnormal pressure in the manner described in knock-knee, but in a reverse direction, the growth of the inner condyle being subnormal and that of the outer condyle excessive. The patella is displaced inwards till it may rest upon the inner surface of the internal condyle. If the development of this deformity be preceded by the forward displacement of the lumbo-sacral joint, the convexity formed by the femur and tibia is directed outwards and forwards, and not directly outwards.

20. To treat the simple acquired deformities, it is obvious that we should attempt (*a*) to improve the nutrition and vigour of the individual; (*b*) to prevent his assuming attitudes of rest, especially that one which is particularly responsible for his deformity; (*c*) to cause him to adopt habitually attitudes of activity; (*d*) to make him perform such exercises as shall improve the condition of his muscular and articular system both of the body generally as well as the affected part in particular; (*e*) in suitable conditions to apply such a mechanical arrangement as will tend to reverse the amounts of pressure which have before been transmitted through the several portions of the epiphysial lines, and in this manner to modify their rates of bone-formation, and so cause the bone to resume its normal form. These means can be applied with advantage in most of the acquired deformities, but not in all, for obvious reasons, as, for instance, lateral curvature; (*f*) to avoid as much as possible the use of instruments which interfere with the full development of muscles &c.; (*g*) to make him rest for sufficient periods of time in suitable postures; (*h*) in suitable cases, as in advanced flat foot, to remove the deformity, and to place and retain the part as much as possible in a position of activity for a considerable period of time, by means of a suitable apparatus.

In the rachitic subject similar methods are adopted to influence the rate of growth at the epiphysial line, and every means must be made use of to remove the changes in the form of the softened diaphyses, which constitute such a marked feature in the disease.

A CASE OF "INTELLECTUAL AURA" OR "DREAMY STATE."

BY S. TAYLOR, M.D. ABERD., M.R.C.P. LOND., &c.

MISS K. I——, aged twenty-five, consulted me in April, 1888. She complained that for the previous two years she had suffered "off and on" from peculiar sensations in her head which she called "fits." I have never had an opportunity of witnessing an attack, but, as the patient is an educated lady and a careful observer, the statements of her own sensations, together with the supplementary observations of friends who have watched her, must be taken as constituting a fairly trustworthy record. I may say that there was no history of syphilis, nor of any hereditary neurosis. Her digestion, circulation, and her respiratory and urinary organs were normal. She told me that suddenly, whilst teaching, writing, or following some mental employment, "a peculiar idea would come into her head"; this was followed by a whole train of thoughts and ideas, which, however, supervened in no regular order of sequence and had no connecting links by which such thoughts could be remembered or even associated with one another. She did not know how long the "fits" lasted; but the evidence of reliable witnesses fixed the duration of each at about two minutes. The sequence of thoughts was described as "rushing through her brain," but none were remembered. Formerly—that is, at the first onset—the "thoughts and ideas," which in their wild career through the mental field constituted the chief symptom, and indeed the only complaint, could be caught or seized and retained. They could consequently be reproduced in speech after the termination of a "fit." When I saw her, however, "they came and went," without any mental image being left, and, indeed, she seemed indifferent to this failure of permanent impression, and stated that she made no endeavour, and had no desire to catch them. The "ideas" at first had nothing of a distressing character; they were chiefly concerning her occupation and her responsibilities, or at times they were about country scenes or agreeable associations. There was occasionally a sensation of "tightness of the head" during, and for a short time after, the fit, and also some slight anæsthesia over the top of the head, "where she felt the fits were." On other occasions after the attack had passed off she experienced a sensation of a heavy weight on the vertex, and felt as though "a nose-bleeding would relieve." The fits were also followed by a burning or flushing on the left side of the face, which was somewhat "numb." She never became quite insensible; she had no muscular convulsions, and at first no premonitory aura. Vomiting never occurred. She had no diplopia, no squint or other sign of muscular paralysis. I could detect nothing abnormal about the optic discs, and she was not colour-blind. Her memory, formerly very good, was, when I first saw her, a little defective. She slept well. She was not overworked, and was cheerful and otherwise healthy. The bowels had a tendency to constipation. She did, however, occasionally complain of anosmia after she had recovered from the "fits." As regards her mental condition at the time of the seizures, although she did not know where she was immediately after their occurrence, her mind recovered itself completely in a few seconds. The frequency of the attacks varied. She often had as many as three a day, and to go four days without one was considered a long interval, and a rare occurrence. There was no family history of epilepsy or other nervous disorder. This state of things went on for four months, and ordinary doses of bromides appeared to have little or no effect.

In December, 1888, I saw her again, when she told me that the last five or six attacks were preceded by an aura. The aura consisted of a sensation of tightness in the waist, to be succeeded by "a rushing-up sensation" on both sides of the chest to the shoulders, neck, and head. This was followed by a fit exactly similar to previous ones, and when she returned to perfect consciousness she experienced flushings and numbness of the face, limited to the left side. She never fell during her attacks, although they (rarely) occurred when she was walking. In addition, they often came on during her sleep and woke her up. The character of the seizures also altered somewhat. There was still no sequence or chain of ideas, but she had a rushing of something through her head which she described as resembling "the rush of a torrent," accompanied by a roaring sound. There was also the important evidence that the attacks were merely temporary losses of consciousness, to be at times followed by anosmia. If they occurred when following any mental occupation—e.g., whilst reading a letter—she did not drop it, but was "determined to read it." This, however, she failed to do; she kept looking at the letter, but was unable to follow its contents. A friend who was watching her said she merely gently waved the letter about. Again, an attack occurred whilst writing a letter. She was determined to keep on with her task, but found afterwards that she had scribbled only, and scribbled over the previously two written lines. If an attack occurred during a conversation, she stopped in the middle of a sentence, and when the fit had passed off she had not the slightest recollection of what she was speaking about immediately before the seizure. Her sister—who, from constant observation, easily recognised the attacks—would speak to her when she was in one, but the patient never answered, and never seemed conscious of having been spoken to, but looked with a vacant stare,

[8] With rare exceptions.

as though she and her sister were perfect strangers to each other.

She subsequently got well under large doses of bromides. Bromide of potassium in scruple doses three times a day failed to have much appreciable effect. It gave no relief beyond slightly postponing the attacks. I was then led to try a combination of bromide of ammonia (nine grains), bromide of potassium (six grains), and bromide of sodium (three grains), three times a day, and she experienced speedy and permanent relief. Anyway, she has had no recurrence for over twelve months. But she still continues taking the mixed bromides, except at short intervals.

Remarks.—There can be no doubt that the phenomena related above were caused by a "cortical discharge," and that the irritation causing the discharge, whatever that irritation may have been, exerted its influence in a region of the brain other than the Rolandic area, and I apprehend that there are other sources of disease or irritation, about which we know little or nothing, besides the mechanical ones of gross lesion. Further, I think it must be admitted that an irritation similar in quality and amount taking place in the cortical grey matter of the Rolandic area would have probably caused spasms, convulsions, stertor, discharges from emunctories, and all those various phenomena which go to constitute an epileptic seizure as commonly understood. It is not necessary that storages and discharges of nerve force should occur only in the motor area. Cortical discharges certainly do occur more frequently in the latter regions of the cerebrum, and thus give rise to the epileptic fit or to Jacksonian epilepsy as the case may be, according to the severity and diffusion, or to the limitation in the area, of discharge. As Dr. Hughes Bennett in an admirably lucid article[1] points out, "the external results or the symptoms.....which are developed depend on the function of the particular cells involved, and may consist of a great variety of motor, sensory, or intellectual phenomena." This is admirably put. Here is a case in which an irritation occurring in a certain portion of the cortical grey matter produces a well-defined effect, and one that is proper only to the cells of that area of grey matter which was in a state of "hyper-physiological" activity. The stimulus can produce that certain and proper effect, and that only, by reason of the local character of the disturbance, and also probably by reason of its comparative weakness. It is epilepsy of the sensory region, and is similar to cases related by Hughlings Jackson, James Anderson, Ferrier, and others. The commotion set up was not sufficient, nor was it far-reaching enough, to seriously involve neighbouring or connected groups of cells, nor was its local severity enough to produce subsequent paralysis (exhaustion) of function. Or at least, if there was exhaustion, it was slight and temporary, the mind recovering itself in a few seconds. The locality of the storm centre does not seem to have been directly on the site of any of the centres of special sense. Two of them, hearing and smelling, were involved in the later history of the case, probably either by direct influence of the explosion, or possibly by a spreading of the disturbance to those centres which were contiguous, these being agitated not so much by the primary shock as by an attempt by the hyper-physiological energy to expend itself in the least resisting paths. That these attacks constitute a variety of epilepsy there can be little doubt. Perhaps the more common form of "motor" epilepsy may supervene later on; it may be months or it may be years hence; but the suddenness of the onset, the intervals of complete recovery, and the train of events which I have described, all help to complete a picture which closely resembles similar cases described by Dr. Hughlings Jackson. It is probable, too, that many cases of "dreamy state" occur, which are overlooked owing to the fact that, being accompanied by the less violent symptoms, they escape the notice of surrounding friends and of medical men, and also owing to the difficulty a patient, other than a highly intelligent one, would have in describing his or her condition. My patient has no recollection of the fit being preceded by any digestive sensation, epigastric aura, or perversion of taste or smell. There was no chewing movement or smacking of lips; but it is not a little singular that the termination of an attack was, in the latter stage, followed by loss of smell and of hearing. There was also no true loss of consciousness; she was never completely insensible; on the other hand, there was, if I may so term it, an over-consciousness, an excessive activity of the brain, together with temporary defect of mental power. The brain, as it were, ran riot, and no account of its activity could be recorded. Such a condition is truly comparable to a dream. On waking, the brain, which but a few minutes previously was impressed with a vivid picture, soon loses this picture and becomes a blank so far as the recent image is concerned. It is probable that one never retains the whole of a dream, the imprint on the mental faculties being only slight, and not deep enough. It is as though only the deeper lines of the etching were "eaten in" on the tablets of our memory, and there remain for any length of time, the finer lines of shading soon losing their sharp and clear definition. Again, on recovery from the administration of ether or other anæsthetic, the brain, which immediately before was in an extremely active state—a condition of physiological activity—never retains the impressions then received. It is only the more vivid flashes of thought which we can recount afterwards, and probably these flashes are those which are received in the early stage of the administration of the anæsthetic, occurring then, as they do, when the brain is better prepared to receive and retain their impression. In support of this, it is in the experience of most anæsthetists that patients on recovery, say from ether, cannot relate their dreams occurring in the immediate past, but recollect all their fantasies of the early part of the administration. In relation to this I apprehend that all mental processes and thoughts occurring in a healthy brain produce some disturbance or alteration in the cells of the cortex which is more or less permanent; and yet an alteration of so subtle a character as not to be detected by any recognised methods of observation. What is known as a mental impression is, I imagine, a mental disturbance, the permanency of which depends on the amount of disturbance which has occurred. I should prefer to call it a "mental scar" which, like ordinary scars in ordinary tissues, depends for its durability on the depth and intensity of the force occasioning it. And as all bodily scars except the most trivial are ineradicable, so I think all mental impressions—save those which are so light and transitory as to barely constitute a mental process—are permanent. It is no argument against this view that memory fails and that forgetfulness occurs. My contention is that the imprint is there, and the "mental scar" is not necessarily obliterated because we cannot for the moment find it. Let me illustrate my meaning. My patient told me that only occasionally and in the early stage did she retain some of the thoughts which rushed through her brain during the fits; and at such times she noticed that similar groups of ideas, which had no connexion with one another, nay, were of the most diverse and opposite character, actually occurred on three distinct occasions. I have had a parallel example related to me by a medical man in perfect health of body and mind. He informs me that on going down a certain street in London, or even thinking about that street, there comes to his mind a mental image of a meadow with a fine elm tree. This occurs invariably under the circumstances I have named, and yet he can in no wise associate the two places. But undoubtedly the mental scar is there, and the stimulus to the recalling of the beautiful meadow is some (to him) unknown connexion thereof with a London thoroughfare. Again, a patient of mine in severe delirium went through a long speech of a character in one of Bulwer Lytton's plays. On recovery he could not repeat a word of the speech, nor has he at any time subsequently, although repeatedly pressed by me to do so, been able to recollect any part of the speech, and cannot understand how he ever recited it. In my own case, during the height of scarlet fever, I recollected a peculiarity in the hair of a relative who died when I was a child. I have ascertained that this peculiarity did exist, but I was certainly in ignorance thereof until the stimulus of a fever recalled the mental impression. It is all very well for the poet to say,

> "Yea, from the table of my memory
> I'll wipe away all trivial fond records,
> All saws of books, all forms, all pressures past,
> That youth and observation copied there";[2]

but the more one studies cases like the above the more one

[1] THE LANCET, March 30th, 1889, et seq.

[2] Hamlet, act i., scene 5.

will tend to the conclusion that the scar, the imprint, the stain, or whatever simile we may use, is fixed permanently on our mental tablets. Certain physiological forces are at times required to reveal them.

Seymour-street, W.

A CASE OF LOCALISED SUPPURATIVE MENINGITIS.

WITH REMARKS ON THE CORTICAL REPRESENTATION OF THE CONJUGATE MOVEMENTS OF THE EYES AND HEAD.

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Cases of meningitis are unfortunately seldom of any value in localising the functions of the cerebral cortex. In no other class of cases is the lesion limited so completely to the surface of the hemispheres. The cells of the grey matter, irritated by the inflammation of the membranes covering them, are thrown into a state of exaltation which allows their functions to be easily perceived. At the same time there is no interference with the paths of conduction down which their influence must travel to its destination. A case of meningitis is therefore free from, at any rate, one disturbing factor, which is nearly always met with in such conditions as tumour, abscess, or other coarse lesion, and which, in all likelihood, often vitiates the solution of the problem of localisation. Unluckily, however, while the lesion in meningitis is always limited in depth, it is in nine cases out of ten absolutely unlimited in superficial extent, and for purposes of localisation becomes practically worthless. When, however, as happens in very rare cases, and as happened in the case detailed below, the inflammation is limited to a well-defined area of cortex, there seems to be no reason why the case should not be utilised for the purposes of localisation; more especially when, as in this case, the area affected includes a part of the cortex, the frontal lobe, the functions of which are as yet by no means universally agreed upon.

Catherine C—— was seen by me first at 9.30 P.M. on Saturday, April 26th, 1890. The history given by the friends was that on Easter Monday, three weeks before, she was wounded on the forehead by a broken jug thrown at her in a drunken quarrel. She remained in good health until two days before I saw her, when she had what they called a "fit." This had, however, not been repeated, and the next thing they noticed—the reason, indeed, of their placing her under my care—was that she had "lost her speech and was rambling." I found her in a condition of aphasia, corresponding to the description of the friends. She could answer questions only as far as "Yes" or "No," but would repeat an answer suggested to her, and would go on repeating the same answer in response to any question. Two inches vertically above the left supra-orbital notch there was a suppurating wound leading down to bare bone. This I was told was the wound which had been inflicted three weeks before. The pupils were equal and normally active. There was no deviation of the eyes. There was slight weakness of the left arm as compared with the right, and also apparently of the left leg. There was considerable vertigo, which made it difficult for the patient to stand. Temperature 101°; pulse 124. On the following day (Sunday) convulsions began, and continued with increasing severity through that day until the Monday, when I transferred her to the Northern Hospital, where she was admitted under the care of Mr. Puzey. Her general condition of course became worse *pari passu* with the convulsions, and on admission to the hospital was very grave indeed.

Nature of convulsions.—Each convulsion appeared to start synchronously in the right side of the face and the right arm. *Face:* The mouth muscles drew the mouth strongly to the right side; there was contraction of the right occipito-frontalis and slightly of the left. The position of the eyes differed at the beginning and at the end of the fit. At first both eyes were tightly closed, but as the convulsions proceeded they were again opened widely. Corresponding with this alteration in the position of the eyelids was the lateral deviation of the eyes, which was a marked and interesting feature in the case. At the beginning of the fit both eyes were turned slightly to the *left;* this position lasted, however, only a short time, and was rapidly succeeded by a very marked deviation to the right side, the latter position being maintained to the end of the fit, when they slowly returned to the middle line, where they remained until the next convulsion came on. *Head:* The head followed the movements of the eyes, being turned first to the *left* slightly, and then very strongly to the right. *Arm:* The convulsion in the arm started by abduction and rotation outwards of the shoulder and supination of the forearm, followed by flexion of the elbow, pronation of the forearm, and flexion of the wrist and fingers. *Leg:* The only movement noticed in the leg was extension of the knee, occurring slightly after the beginning of the convulsion in the arm. As the convulsions were extremely numerous, it was easy to observe with great accuracy the spasms in the various parts. When the patient was admitted into the hospital, the convulsions were occurring every few minutes, and her condition was very grave. Mr. Puzey decided to trephine over the situation of the posterior part of the second and third frontal and the lower part of the ascending frontal convolution, in the expectation of finding pus either between the membranes or in the substance of the brain. The dura mater when exposed did not pulsate, and, on excising it, pus immediately escaped. The surface of the brain was seen to be flattened, and apparently compressed by the purulent exudation. As there was now a free opening for the escape of the pus, and as the patient's condition was becoming much worse, the skin flap was readjusted, and the wound dressed. The patient survived the operation only a short time.

Necropsy.—In removing the scalp, a piece of exfoliating bone, about ½ in. × ¼ in., was found in the position of the wound of the forehead. On taking off the skull cap, the trephine opening was seen to correspond with the lower part of the ascending frontal and parietal convolutions, and a small part of the posterior end of the second and third frontal convolutions. There was suppurative meningitis occupying nearly the whole of the outer surface of the left frontal lobe, but more marked and with more exudation over the posterior ends of the second and third frontal convolutions and the lower half of the ascending frontal. The lower half of the ascending parietal was also covered by a layer of pus. The suppuration was limited to the parts mentioned and the cortex was flattened by the exudation. There was no suppuration in the substance of the grey matter or beneath it. There was some congestion of the pia mater over the whole of the left hemisphere, but the suppuration was accurately limited, and formed what was practically an intra-meningeal abscess, which had been tapped by the opening into the dura mater at the operation. The position of the necrosed bone corresponded with that of the anterior part of the second and third frontal convolutions.

Remarks.—The starting point, it will have been seen, of the convulsions in this case was a lateral movement of the eyes and head and a spasm of the face generally, synchronous, or almost synchronous, with various movements of the upper extremity. The exact representation of the various movements of the arm in the cerebral cortex has been so exactly and minutely worked out by Horsley, Beevor, Schäfer, and others in monkeys, and their results have agreed so closely with clinical and pathological observations in man, that I do not think any useful end would be served by referring in detail to the various movements noticed in this case, and their explanation as seen at the post-mortem examination. There seems to me, on the other hand, to be more than one point of interest in the nature of the lateral movements of the head and eyes as they were repeatedly observed in these convulsions. They may be considered from two points of view—viz., from the point of view of their cortical representation, and from the point of view of the direction of the deviation in the various stages of the fits.

Localisation of conjugate deviation of eyes and head.—In a paper in the *International Journal of Medical Science*, 1887, Professor Horsley thus sums up the result of experiment on the question of localisation of these movements: "As indicated by Ferrier, the area of representation of these parts occupies almost solely the middle frontal gyrus, and this is no doubt the focus of representation of the movements of turning the eyes and head to the opposite side: but a minute analysis, by Dr. Beevor and myself, to be published shortly, will show that a much more extensive representation exists. It must be left at present an open

question how far the representation of the important and interesting conjugate movement extends forwards in the frontal lobe. ..... That the area of the function is continued over the margin of the hemispheres has already been shown by Schäfer and myself."

This case, of course, does not in any way help to localise exactly these functions. It is, however, a confirmation, from a clinical point of view, in the human subject, of the results given above by experiment on the monkey, and it is interesting to observe that the area of greatest inflammation corresponds with the spot given by Ferrier as the centre for conjugate deviation—viz., the posterior part of the middle (and lowest) frontal convolution. There is a striking lack of evidence in published cases of such lesions as tumour of the brain &c., of the localisation of this function in man. The reason no doubt is, as Dr. Gowers states, that in cases where paralysis is taken as a guide to localisation, before the loss of conjugate movement of the head and eyes can be observed, this movement, being represented in both hemispheres, comes to be performed from the opposite side of the brain. Irritant lesions on the other hand can only be accepted with reserve as guides to localisation, because they often produce indirect effects by the spreading of their influence, much greater than really correspond to the position of the lesion. Thus irritant lesions could not, if they stood alone, be used for the purpose of exactly localising the centre for such bilateral movement as that of conjugate deviation and the like. When, however, they point, as in this case, to results already obtained by experiment, they are, I think, of considerable value. It seems, therefore, that it is in bilateral movements especially that it becomes proper to look to such cases of localised meningitis as this one to confirm the result of experimental inquiry, while not pretending to obtain anything like the accuracy that can be obtained in cases where small, chronic, localised lesions as a tumour produce well-limited local paralyses

Direction of the deviation of head and eyes.—As movement to either side is represented in both hemispheres, conversely excitation of one hemisphere ought to be able to produce movement in either direction. The converse to this is seen in cases of hemiplegia, where, as shown by Pitres and Friedländer (quoted by Dr. Gowers), the so-called bilateral muscles are always found distinctly weakened on the unparalysed side. I am not aware whether this has been found to be true of the conjugate movement of the head and eyes. It was a very striking, and to me an unexpected, phenomenon in this case, to find the lateral deviation to be at the beginning of each fit towards the diseased side of the brain. It is true this was very soon replaced by movement away from the irritated hemisphere, but still it seemed a curious thing to find irritation of the centre of movement producing as a first effect movement towards the side of the irritating lesion. The explanation now, however, seems to me to be that the irritation of the inflammation affected the centres for both sides in the left hemisphere, first causing the deviation to the left and afterwards to the right, thus as it were resolving the combined centre into its two lateral portions. If this explanation is the correct one, it would seem to tend to indicate that the bilateral representation of muscles habitually associated in their action with those of the opposite side is something more than what Dr. Broadbent suggests—viz., a connexion of their lower—spinal and bulbar—centres. As far, at any rate, as concerns the lateral movement of the head and eyes, it would seem to consist of the actual presence of two more or less distinct centres in each hemisphere for the movement towards and away from that side respectively.

I wish to express my indebtedness to Mr. Puzey for permission to publish this case.

THE NETHERLANDS ASSOCIATION FOR THE ADVANCEMENT OF THE MEDICAL SCIENCES.—At the annual meeting of the Netherlands Association for the Advancement of the Medical Sciences it was arranged to address a request to the Government *à propos* of impending legislation that vaccination should be obligatory before an infant is twelve months old. A proposition that Government should be requested to oblige all medical students to pass in mental diseases was negatived, and a motion substituted and passed requesting that facilities should be given for the establishment of a professorship of psychiatry at one of the Dutch universities, so that all students may have the opportunity of obtaining instruction in this subject.

CONGENITAL ENLARGEMENT OF THE THYROID; REMOVAL; RECOVERY.

BY LENNOX BROWNE, F.R.C.S. ED.,
SENIOR SURGEON TO THE CENTRAL LONDON THROAT AND EAR HOSPITAL, ETC.

M. T——, female, aged ten, was admitted on Nov. 21st, 1889. The patient was born with a "lump" in her neck the size of a marble, which has been growing ever since to its present form.

State on admission.—In the region of the thyroid gland is a large irregular tumour about the size of a fœtal head at seven months. The tumour is roughly divisible into two parts: right and left. That on the right is less prominent, and somewhat globular with secondary lobules, elastic, and free from adherence to the skin. The more prominent left portion is roughly quadrilateral in shape, elastic, but more resistent; it has secondary nodules, and the front is intimately adherent to the skin, which is of a dusky blue colour, ulcerated in places, and marked with distended superficial veins. The ulcers exude a thin serous fluid, and are devoid of granulation. The whole tumour is fairly movable on the deep structures, but it has its origin from attachment to the thyroid gland, as is evidenced by its following the movements of that body during the act of swallowing. There were no enlarged glands, and the child, beyond being rather thin and anæmic, was apparently in good health. The tumour was punctured by an exploring needle in three different places, blood only being drawn off. For two or three days afterwards these punctures exuded a thin serous fluid which,

under the microscope, revealed nothing characteristic. The patient was kept in the hospital under observation, and for the purpose of being fed up, for a month, during which time the tumour very appreciably increased in size, the enlargement being especially noticeable on the left side, where a well-marked lip grew in a downward direction, incorporating the skin in its progress. The health of the child did not depreciate, but, on the contrary, improved.

Operation (Dec. 22nd, 1889).—Mr. Lennox Browne removed the tumour under chloroform. An elliptical incision was made surrounding the left portion of the tumour that was incorporated with the skin which was there sacrificed. Elsewhere the tumour was dissected out without difficulty; hæmorrhage, which did not amount to an ounce in quantity, was for the most part controlled by torsion; two ligatures were employed to secure the base. The portion removed included the left lobe and isthmus of the thyroid body and a portion of the right lobe. The after history was most satisfactory. The patient got up on Jan. 18th, 1890, less than a month after the operation, and the wound had entirely healed over on

Feb. 24th. At one time it was feared that the cicatrices would cause contraction of the neck on the left side, and a poroplastic apparatus was made with a view to prevent this. However, the apparatus was never worn, as sand-bag pillows effectually prevented any undue declension of the head to either side. The patient was able, on leaving her bed, to move her head about in all directions, and at the time of her discharge had no inconvenience whatever in this respect. She had grown and increased in weight proportionately.

Macroscopical appearance of tumour. — The tumour weighed 8½ ounces, was of an irregular oblong shape from before backwards; encapsuled and adherent to the skin in front. Behind there was a piece of apparently normal thyroid gland adherent to the capsule of the tumour. On section the growth was hard and grating, but not shrinking; of a pinkish white colour, and intersected in all directions by dense fibrous tissue, enclosing small cysts looking like boiled tapioca, and which contained a yellowish colloid material. In the cyst walls were several cartilaginous or calcareous flakes.

Microscopical examination of tumour.—It proved to be a fibro-cystic goitre. The fibrous element was very abundant

choking up many of the follicles, which in other instances had dilated to form the numerous cysts that the growth contained. Here and there were seen remains of colloid material like large starch grains in the midst of fibrous tissue and not contained in a follicle. There were no sarcomatous elements, and the piece of thyroid gland removed at the operation was perfectly healthy. The growth was a fibro-cystic goitre originating from the isthmus of the thyroid gland.

Remarks.—This case is interesting, not only that it was congenital, but also because it had been diagnosed by others to be a cystic sarcoma. It makes the eleventh consecutive one of more or less complete removal of enlarged thyroid in my practice all with recovery, and with only one—in which the operation was confined to removal of the isthmus—of recurrence.

I am indebted to Dr. Walter Fowler, registrar, for the notes of the case.

Weymouth-street, W.

LONDON WATER-SUPPLY. — Representatives of a number of metropolitan vestries and district boards met in conference in St. James's Vestry Hall, Piccadilly, on the 31st ult., and appointed a committee to prepare a Bill for the purchase of the undertakings of the water companies.

MANCHESTER ROYAL INFIRMARY.—At the annual meeting of the supporters of this charity on the 1st inst., a letter was read from Mr. W. J. Crossley offering to contribute £5000 towards the cost of building a new infirmary on the present site. It was stated that the cost of the work would not be less than £150,000. It was decided to ask the board of management to consider the offer.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tam aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

ANEURYSM OF THE SUPERFICIAL FEMORAL ARTERY IN SCARPA'S TRIANGLE; LIGATURE OF THE EXTERNAL ILIAC ARTERY; RECOVERY.

(Under the care of Mr. GEO. LAWSON.)

DURING the last few years many interesting additions have been made to our records on the treatment of diseases of the circulatory system. This case illustrates, amongst other points, a fact which has been prominently brought forward, the value of antiseptics in operations on the main arterial trunks. The attempt to cure the aneurysm by means of pressure did not succeed; in fact, the swelling became larger. The case forms, therefore, a decided contrast to a similar one under the care of Mr. Lawson which we published[1] some years ago, and in which the patient (a man aged thirty-six) recovered after the employment of pressure to the arteries above. We would draw attention to the absence of any tendency to protrusion through the scar made by the operation, which must be ascribed to the careful suturing employed. For the notes of the case we are indebted to the house surgeon, Mr. Douglas Lawson.

J. A——, aged forty-nine, a traveller, was admitted into Pepys' Ward on May 26th, 1890. Patient states that he has never had any illness, and there is no history of syphilis. On Dec. 14th, 1889, he was knocked down in the street and kicked in the groin, but does not know whether it was on the left or right side. Sometime in February he felt a shooting pain in the left groin, and on examination he found a tumour about the size of a bantam's egg. He did not then notice whether or not it pulsated. The pain left him in about a fortnight, and he then went on with his usual work and took no further notice of the swelling till a fortnight before coming to the hospital, when the pain returned and the leg became quite numb. From this time the swelling gradually increased until it attained its present size.

On May 23rd patient came to the out-patient department and was advised to come into the hospital without delay. He was admitted under Mr. Lawson on May 26th. Patient is a stout, healthy-looking man. In the left thigh, about the centre of Scarpa's triangle, is a distinctly circumscribed pulsating swelling about the size of an orange. The pulsation is expansile, and can be easily stopped by pressing on the femoral artery above. The tumour cannot be separated from the artery, and on listening over it a blowing bruit can be heard. There is no redness or œdema of the skin over it. There is no appreciable difference between the pulse of the posterior tibial arteries on each side. There is no swelling of the leg below, but there is a good deal of numbness in the leg and foot, and since he has been in he has complained of pain on the inner side of the knee. There are no signs of aneurysm elsewhere. The heart sounds are normal. Temperature normal; pulse 68. On May 30th Mr. Lawson tried compressing the femoral above the aneurysm by means of weights. They were applied for five hours altogether during three separate times in the day. Each time the weight was obliged to be removed on account of the great pain it caused.

May 31st.—Weights applied for three hours and a half; never for more than one hour at a time, as the patient was unable to bear the pain for a longer period.

June 1st.—Weights applied for three hours and a half.

2nd.—Weights applied for six hours and a half; patient had great pain for two hours after they were removed.

3rd.—Weights applied for three hours; the superficial veins are more distended and visible, the tumour was

[1] THE LANCET, Mirror of Hospital Practice, vol. ii. 1867, p. 514.

noticed to have increased about one-third in size since last night; there was slight œdema of the skin and the leg was very painful. All compression was left off at 2 o'clock this afternoon and an ice-bag applied. Temperature normal.

4th.—The tumour is double the size it was on the 2nd. In the afternoon, the patient was anæsthetised. A curved incision was made from one inch above the centre of Poupart's ligament and carried upwards and outwards for about three inches to opposite the anterior superior iliac spine. The layers of muscles were divided on a director. The subperitoneal tissue was exposed, and with his fingers Mr. Lawson gradually separated and turned up the peritoneum and exposed the external iliac artery. An aneurysm needle was passed under it from within outwards and the artery ligatured with a stout carbolised catgut ligature. All pulsation in the tumour stopped immediately the ligature was tightened. The muscular layers were united with catgut sutures, and the skin incision with silk sutures. The wound was thoroughly washed out with perchloride of mercury (1 in 2000), and then dressed with carbolic gauze wrung out in 1 in 20 carbolic acid lotion, and covered with absorbent wool. The leg and thigh were wrapped in a thick layer of cotton-wool and a flannel bandage.

June 5th.—Temperature 99°; pulse 100. The patient had a good deal of pain and numbness in the leg last night. He is much better this morning. No pulsation in the tumour, which remains the same size as before the operation.

6th.—Temperature 100°; pulse 90. There is still a little numbness in the foot, but less than before; no pain.

7th.—Temperature 99·6°; pulse 84. All the numbness has disappeared. Since this time the patient has made an uninterrupted recovery. He has had no signs of peritonitis. There has been no sign of pulsation in the tumour, and no numbness in the leg, which is the same temperature as that on the other side. The temperature has never risen above normal. By June 12th the wound was completely healed. On July 2nd the patient began to get up.

July 18th.—There is no pulsation in the tumour, which is very hard and about one-third smaller than at the time of the operation. There are no signs of any hernia through the scar of the wound.

22nd.—Patient left the hospital quite well.

CARDIFF INFIRMARY.

A LARGE HEPATIC ABSCESS; RAPID RECOVERY AFTER OPERATION; REMARKS.

(Under the care of Dr. C. T. VACHELL.)

THE following case, for the notes of which we are indebted to Mr. John Thomas, senior house surgeon, well illustrates the marvellous power of repair the liver possesses when the conditions essential to recovery are rendered favourable. The size of the abscess was unusually large, and the duration of treatment after operation less prolonged than might have been expected. Mr. Thomas ascribes this result as in a great measure due to the method of abdominal bandaging which was employed; it possesses many obvious advantages. Dr. Cyr,[1] in his practical treatise on Diseases of the Liver, gives statistics of 563 cases of abscess of the liver collected from various sources, the calculated results being as follows: In 55 per cent. the patients died without the abscess having been opened or given way, 14·9 per cent. were opened by operation, 10·5 per cent. spontaneously burst into the lung, 7 per cent. into the peritoneum, 5·5 per cent. into the pleura, 1·9 per cent. into the colon, 1·6 per cent. into the stomach and duodenum, and 7 per cent. into the bile-ducts. In three cases the abscess opened into the vena cava, in two into the renal pelvis, and in one into the pericardium. With our present method of antiseptic hepatotomy the percentage of recoveries continues to improve, and there is less reason for delay in calling in surgical aid for the relief of hepatic abscess.

Wm. V——, aged thirty-three, a soldier, was sent by Dr. Hall Redwood into the Cardiff Infirmary on April 3rd, 1890, to be under the care of Dr. C. T. Vachell, who very kindly allowed Mr. J. Thomas to operate and to publish the case. On admission the patient looked sallow and wasted, eyes sunken and lustrous, and surrounded with dark areolæ; his skin was dry and hot, and felt loose and baggy on his emaciated limbs. His illness commenced in 1888, when he had dysentery in Burmah, and was there confined to hospital for five or six months, whence he was invalided home to Netley, where he was reported to be well in about two months; he then went to Woolwich, and was discharged in the ordinary course at the end of his ten years' service (May, 1889). He then went to his home in Hertfordshire and started work as a labourer, and was attacked with dysentery again in October of last year; at the end of three weeks he was allowed to go to work again, but at the end of last March he was obliged to leave off work altogether. His condition between the date of admission and that of the operation was briefly as follows:—Continued elevation of temperature, being about one degree higher in the evenings, the morning temperature being on an average 99·8°; pulse 80, regular and fairly full; night sweats; bowels open two to four times daily, the motions being deficient in bile pigment and offensive, no blood passed; appetite good. He had a large uniform swelling of the right side of his thorax and abdomen, extending from immediately below the right nipple to about three inches below the tip of the xiphoid cartilage. He complained of constant aching pain in the region of the liver, and over it there was marked tenderness on percussion; it was impossible to examine for deep fluctuation owing to the pain it gave the patient. He had two or three violent attacks of dyspnœa, which were attributed to diaphragmatic pleurisy on the right side, and were relieved by hypodermic injections of morphia. Dr. Vachell explored the liver with an aspirating needle and discovered the abscess.

April 12th.—The patient was anæsthetised with a mixture of chloroform and ether, and a free incision with a scalpel was made through the skin and the right rectus abdominis muscle down to the surface of the liver, which was adherent to the parietes, immediately below the costal margin. Then the scalpel was plunged deeply into the liver, and at a depth of about two inches the abscess was reached and a No. 24 drainage-tube was put in to the bottom of the cavity. Ninety-six ounces of coloured pus ran out at the time, irresistibly reminding one of the colour and consistency of chocolat au lait. Towards the close of the evacuation of the pus air whistled in and out as if through an empyema tube. About a drachm of iodoform emulsion was injected into the abscess cavity, and the wound and the hollow of the abdomen were well packed with salicylic wool and surgical tow, and firmly bandaged from the pubes to the chest.

13th.—The wound was dressed in the same manner, and the temperature remained normal after this dressing. From this date the discharge was mixed with much mucus; the drainage-tube was frequently shortened, and finally removed on the 26th of April. The cavity and the skin wound were soundly healed on the seventeenth day after the operation, and the stools had been of a natural colour for several days. On the 9th of May the patient went home, looking well and having rapidly increased in weight.

Remarks by Mr. JOHN THOMAS.—The rapid closure of such a large cavity in an organ which is continuously in motion occurs under conditions different from those we try to establish—for instance, when treating abscesses in the limbs or at their junction with the trunk. The only method of bringing into apposition the walls of a cavity in the liver seems to be that of carefully filling the hollow of the abdomen with material possessing a degree of elasticity and then firmly bandage. In this case the effect was easily observed on the second day after the operation by leaving exposed the end of the tube and bandaging the rest of the dressings. By attention to this detail the healing of a breach in the hepatic tissue is much hastened, and the danger of the occurrence of sinuses is greatly diminished. The study of abscesses in various situations clearly indicates that movement plays a dual part in the history of their progress; on the one hand, it has been long recognised that irregular or spasmodic movement is a fertile source in the formation and maintenance of a sinus; whilst on the other, movement that is more or less rhythmical and of a regular intensity is quite a modern agent in the field of therapeutics. The liver very soon regained its functions after the operation, judging by the improvement in the patient and the restoration of bile in the fæces. The patient has now been at work for some time, and feels quite well.

[1] Sajous, vol. i. 1888, p. 827.

Notices of Books.

Character in Body and Parentage; with a Chapter on Education, Career, Morals, and Progress. By FURNEAUX JORDAN, F.R.C.S. London: Kegan Paul, Trench, Trübner, and Co.—This little book, published in a popular form and under a fresh title, is on the same lines as a larger volume written some time ago by Mr. Jordan. In the present work he divides the large mass of humanity into two classes—"the impassioned and the unimpassioned." The former may be distinguished, as a rule, by abundant hair growth, both on the face and head, more or less pigmented skins, and flat or concave backs; the latter by scanty hair growth, thin skins, and a convex curve of the spine. Men and women are both treated under these heads in an amusing and observant manner. Mr. Jordan attributes many of the unhappy marriages which occur to the mating of impassioned with unimpassioned persons, and the consequent detrimental effect on the rising generation. He says: "One boon will at any rate follow a knowledge of the anatomy and physiology of the impassioned and unimpassioned temperaments; and of those who are neither the one nor the other, the chooser in the marriage choice will choose with open eyes. One man will say, 'here is an estimable, well-ordering woman, but life to me without ardent affection given and received and without warm sympathy is of little value.' It is possible that another man may say, 'I prefer an active industrious woman, who will solve for me all social difficulties—one who will not trouble me with foolish sentiment.'" What a blessing Mr. Jordan will have conferred on humanity if it can be proved that any rule of this sort is to be depended on, and if men and women can be induced to follow it.

L'Exposition Universelle. By M. HENRI DE PARVILLE. Paris: J. Rothschild. — This is an excellent memento of the Great Paris Exhibition. In a very compact and portable form we have some seven hundred small illustrations of the principal features of the Exhibition, which, during the 185 days it remained opened, proved so great a success that 28,149,353 entrances were recorded. This beats all previous records to the extent of two to one. Such a success cannot and should not be forgotten. Therefore we must feel indebted to M. de Parville for the work, which will materially contribute to keep the memory of this great show fresh in mind. Apart also from these general considerations, we notice with pleasure that M. de Parville has reserved a prominent place in his book for the remarkable exhibits that gave graphic evidence of the very considerable progress made in sanitary matters by our neighbours during the last few years. Two long chapters on the exhibits organised by the Paris Prefectures of the Seine and of Police, amply illustrated, bring these facts well before us. We have sections of the various types of houses, how they are drained, where the cesspool is placed, and how ventilated. The whole history of the Paris sewers is also given, with sketches, and sections of the sewers back to the earliest records. By the side of these old and very imperfect canalisations we find illustrations of the most modern types. The pictures are very small, yet for the most part sufficiently distinct. Models of the new automatic flush tanks are given, as also plans of the Plains of Gennevillier, where one-third of the Paris sewage is utilised for agricultural purposes. There are, further, many illustrations showing how Paris is supplied with water, how the street and house refuse is removed, and finally how wonderfully Paris has grown and developed during the last hundred years. Of course these technical matters would be more fully and better explained in a book devoted exclusively to sanitary engineering. But we look upon it as a promising sign of the times that such questions hold a place, especially so prominent a place, in a work destined for the general public. This is not a work on hygiene, but on the Universal Exhibition—on every phase of that marvellous display; and it is very encouraging to find that public opinion has sufficiently developed in France to have justified the author in giving so much space to public health questions.

The Indian Medical Service. A Guide for Intending Candidates for Commissions, and for the Junior Officers of the Service. By W. WILFRID WEBB, M.B., Surgeon Bengal Army. Pp. 146. London: Thacker and Co. 1890.—This book supplies a want which has been much felt. Hitherto the only information available for the guidance of candidates for the medical service, and subsequently on joining as officers, was to be found in the memorandum issued from the India Office for the use of candidates, and the official regulations of the Indian service. But the former is very meagre, and there is much of a nature that would smooth the young officer's career on joining which is not to be found in the latter. Dr. Webb has done a good service in preparing this handbook. It contains all the information requisite to enable the candidate to prepare himself for the competitive examination and to make the best use of the valuable opportunities of instruction at Netley, if so fortunate as to be included in the list of surgeons on probation. The hints as to outfit for India, and for the guidance of the young officer on arrival there, should be the means of saving him much unnecessary expense, worry, and annoyance. The pay, allowances, and regulations affecting appointments in the military and civil branches of the medical service are clearly laid down, and the "leave" rules are given in some detail. We recommend the book to all who think of competing for admission into the Indian Medical Service.

Dental Surgery for Medical Practitioners and Students of Medicine. By A. W. BARRETT, M.B. Lond., M.R.C.S., L.D.S.E.—This little book covers a great deal of ground—First and Second Dentition, Abnormalities, Irregularities, Caries, &c.,—each subject being treated concisely and lucidly. Of course, such a broad field as the treatment of irregularities can be but imperfectly understood from perusing nineteen small pages, but the general principle may be grasped. The method by which may be obtained a facsimile of the teeth and jaws in plaster-of-Paris is explained, and will be found useful to the medical practitioner, whether he wishes to have a model for dental purposes or for recording a deformity. Cure of toothache otherwise than by extraction, anæsthesia, bridge work, and pivoting teeth have their share of attention, and the extraction of teeth is specially dealt with as being the most common dental operation the general practitioner is called upon to perform. In speaking of erosion or the "denuding process of Hunter," Mr. Barrett gives as the cause friction produced by the toothbrush; but that there are other causes at work is shown by its frequent occurrence in situations which the toothbrush cannot reach, and the observation that a similar wasting of the necks of the teeth has been found in the sea-lion (Otaria jubata). The illustrations are good, and there is a capital index.

The Author's Hairless-paper Pad. (The Leadenhall Press.)—By the use of this paper-pad writers are enabled to avoid the inconvenience they often experience by the clogging of the pen with the fibrous or hairy surface of ordinary writing paper. The pen glides over the paper with great freedom, yet without slipping. Each pad contains fifty sheets, which are easily detached.—The *Author's Hairless Paper-pad Holder*, issued with the above, consists of a square board, with a wide flange down the left side and across the bottom to prevent the pad slipping. This contrivance is intended to be used for writing on the knee.

THE LANCET.

LONDON: SATURDAY, AUGUST 9, 1890.

NEVER in the history of medicine has so great a gathering of its followers taken place as that which the present week has witnessed in the chief city of the German Empire. It says much for the spirit that animates our profession that men should flock from all parts of the globe to interchange ideas, and to make the acquaintance of those whose names stand foremost in the ranks of medical science. It shows, too, that there is in our art a link that binds nations together, however much they may be divided by political and national opinion. In the remarkable success of this Tenth International Congress even the most cynical cannot fail to see the promise of a day when all nations of men shall learn that the bonds which unite are stronger than the sentiments that so often divide peoples. Nor could any country in the world be more fittingly the seat of a great medical congress than Germany. In the promotion of higher learning she undoubtedly leads the way. In medical science she has been the birthplace of many discoveries which, to use an expressive term from German source, are admittedly "path-breaking" in their results. When we recall the services rendered to medicine and surgery by such men as TRAÜBE, FRERICHS, COHNHEIM, and VON LANGENBECK, not to mention those who happily are still adding laurels to their fame, we cannot but admit that Germany has within modern times done very much to advance the progress of medicine, especially in its scientific aspects. And in the person of its illustrious president this Congress has seen embodied the spirit of the medicine of to-day. Wherever pathological science is studied the name of VIRCHOW is a household word. It would be difficult to find any man who is better entitled to stand as the leading representative of the medical profession in all countries, since in no part of the world has his influence in moulding medical thought and in furthering the cause of rational medicine been unfelt.

The true keynote of the aims of these great medical congresses was struck by Professor VIRCHOW in his eloquent and appropriate opening address. This was that medical science is bound up with our common humanity, and that the people gladly acknowledge the benefits that it is daily conferring upon them. Of no country can this be said so truly as of Germany, where so much has of late years been done in the sanitation of its large cities, and where the organisation of health departments is tending so rapidly towards completeness. The practical interest taken by the German Government in the promotion of the success of this Congress is only one evidence of the regard in which, from the highest in the land to his poorest subject, the pursuit of medical science is held. The visitors to the Congress will have seen in the very complete Exhibition established in connexion with the meeting how thoroughly this recognition of the place taken by medicine in the care of the public health has been admitted by municipal and State authorities. Indeed, as Professor VIRCHOW pointed out, medicine interpenetrates every part of social life. Well might he say that his country, which some have thought was concerned in military aggrandisement alone, had not neglected the pursuit of those things which are at once a guarantee of peace and an earnest of the desire of the nation to dwell in amity. For great as is the military organisation of Germany, severe as is the military discipline under which all her citizens must pass, there can be no real desire for war among a people who so sedulously cultivate the arts of peace. In the presence of the vast assembly of physicians and surgeons of every nationality, Professor VIRCHOW did well once more to emphasise this fact, and in so doing he has done good service to the world at large.

Of the work of the Congress it is too early to speak. Its extent may be faintly realised by remembering that it has been carried on in no fewer than twenty different sections, and that the total number of communications exceeds 600. The Transactions, towards the production of which public money has been freely granted, promise to surpass even those of the memorable meeting in London nine years ago. But besides the sectional work, addresses have been given by some of the leaders of our profession, men who have done much to advance the science and art of medicine. Sir JOSEPH LISTER, whose fame on the Continent is as high as it is in English-speaking lands, was the first to address the general meeting on the subject which has revolutionised surgical method,—Antiseptic Surgery. Professor KOCH, whose discoveries in the realm of etiology have altered so profoundly our ideas concerning the nature of infective disease, spoke of Bacteriological Research. Professor BOUCHARD of Paris, who has contributed so largely to the elucidation of some of the deeper problems of deranged nutrition, has dwelt on the Mechanism of Infection and Immunity. Professor AXEL KEY of Stockholm, who has greatly advanced our conceptions of physiology, dealt with the important topic of School Hygiene in relation to Puberty Changes. Dr. HORATIO WOOD of Philadelphia, whose work in therapeutics is so much appreciated, took Anæsthesia for his subject; Dr. CANTANI of Naples, an indefatigable worker in medical pathology, dealt with Antipyresis; Professor MEYNERT of Vienna, who has unravelled so much of the intimate structure of the nervous system, spoke of the Functions of the Brain; and Professor STOKVIS of Amsterdam, one of the soundest clinical physicians of the day, selected Colonial Pathology for his topic. In no previous Congress have so many general addresses been delivered, embracing so many and varied subjects. England, Germany, France, Sweden, America, Italy, Austria, and Holland each contributed to stamp the international character of the occasions on which they were given.

It is impossible to estimate duly the labour entailed on the Organisation Committee in the arrangements for the successful carrying out of this vast programme, which includes also the social as well as the scientific objects of the meeting. Happily the Congress has met in a land which is well experienced in Congresses, although never has it had to provide for the

instruction and entertainment of so large an assemblage. The capacity for organisation has been tested to the uttermost, and with a brilliant result. Berlin may well be proud of the pleasant if arduous duty that she has had to perform during this week, and it must be a satisfaction to those who have devoted so much pains to secure the success of the Congress to know that it cannot but bear good fruit. The Tenth International Congress, whilst outvying its predecessors in magnitude, has also done much to promote the cause of medicine and to further the interests of humanity. May the day be far distant, or rather may it never arrive, when men become weary of the useful and beneficent work which is exemplified in such international gatherings.

THE second report, which has just been issued by the Royal Commission on Vaccination, contains an account of the proceedings of the Commission from the date of their first report up to Feb. 19th last, and it embodies the evidence of no less than forty-three witnesses. The first volume contained the evidence of a number of prominent witnesses who were in favour of vaccination, and this class of evidence is continued throughout a large portion of the present volume, twelve additional witnesses having been called under the first heading to be investigated—namely, "The effect of vaccination in reducing the prevalence of, and mortality from, small-pox." We do not propose, on this occasion, to advert at any length to this evidence, seeing that it deals very largely with data which have so often been before the medical profession. Thus, the experience of the army and of the navy as to vaccination is set out; the experience in the German army, especially since revaccination became compulsory, is detailed by Dr. HOPKIRK, who had previously given an account of the results of the German Commission in the Transactions of the Epidemiological Society; the experience of Ireland is supplied by Dr. GRIMSHAW and Dr. MACCABE; Dr. BARRY occupied five sittings in giving a complete account of the Sheffield epidemic in its bearing on vaccination; and Mr. SWEETING and Dr. GAYTON contribute experience from the Metropolitan Asylums Board Hospitals. Then follow three witnesses from the Local Government Board—viz, Dr. THORNE THORNE, Dr. CORY, and Mr. FARN, whose evidence relate essentially to the general administration of the Vaccination Acts from the medical point of view, and to the question of lymph-supply, both humanised and direct from the calf. The evidence referred to covers a large portion of the volume, it deals with material that hardly calls for repetition in any general article, and it places in an easily accessible form a vast amount of information heretofore scattered amongst different volumes and official documents, and as such it will be of great value to all who are interested in the question of the operation of the Vaccination Acts.

The remainder of the volume is taken up with the evidence of persons who are opposed to vaccination, either in its entirety or as compulsorily administered in this country. The first among the opponents of vaccination is Dr. CHARLES CREIGHTON, who is well known as the writer of the article on Vaccination in the "Encyclopædia Britannica." We have on a former occasion expressed astonishment that he should have been selected for this purpose, having regard to the opinion generally entertained that writers of extreme views on one side or another were not selected for the purpose of contributing to a work which has usually been looked upon as embodying the generally received views of those having expert knowledge on the subjects dealt with. But Dr. CREIGHTON, in his evidence before the Commission, makes an admission which goes to show that he had up to that time avoided letting it be known that he had gone over to the ranks of the anti-vaccinationists. Thus, when definitely asked by Mr. DUGDALE, Q.C., whether "vaccination affords any protection against small-pox," he answered that he had been anxious to avoid the broad question, but as he was bound to answer it, his answer was that "it affords none"; adding, in answer to another commissioner, "none at all." This, of course, clears up much that was inexplicable in Dr. CREIGHTON'S recent writings, and goes some way to explain matters as to which he was cross-examined. One of these points has become historical, and it needs to be recalled in the light of the information recently acquired with regard to it. Dr. CREIGHTON, in his Encyclopædia article, made a statement to the effect that in the small-pox hospital of the South Dublin Union all the nurses had, according to Mr. JOHN THORPE, enjoyed an immunity from the disease, whereas only seven of them had been revaccinated, the remaining twenty-nine not having been submitted to that operation, and he added that on this Mr. PORTER had exclaimed, "Wherein is the necessity for the operation?" This statement has been again and again repeated by different persons, and it has been put forth as lessening, if not altogether setting aside, the value of the statements, made in the previous volume, as to the extraordinary immunity from small-pox of revaccinated nurses in the metropolitan and other hospitals. But on cross-examination by Sir WILLIAM SAVORY, Dr. CREIGHTON had to admit that he only quoted the statement, that he had made no further inquiries whatever into the matter, and that he knew nothing as to whether the twenty-nine nurses in question had had small-pox, although this circumstance would, he admitted, have been a "material circumstance." A statement was then read from Dr. MACCABE as to this incident, and in this statement the following passage occurs:—"The practice then was to employ as nurses only such inmates of the workhouse as bore evidence of having had small-pox; all others were revaccinated." This story is typical of the class of evidence—so called—against vaccination put forth by those whose ranks Dr. CREIGHTON has joined, and its value will be easily appreciated. And, whilst Dr. CREIGHTON declares himself quite satisfied with his statement, he has only to say as regards Mr. MARSON'S experience and that derived by Dr. BARRY at Sheffield, as to the immunity of nurses from small-pox, that he, who claims through the Encyclopædia to be a teacher on this subject to the English-speaking world, does "not feel bound to explain why they [the nurses] did not have small-pox." And dealing generally with the whole of the Sheffield experience, which went to show in so conclusive a manner the enormous value of a comparatively recent vaccination as a protection against small-pox,

and hence the freedom from the disease enjoyed by vaccinated children, Dr. CREIGHTON practically disposed of the matter by saying that he always had a preference for concrete facts; by which we suppose him to mean that he preferred to lump together with the recently vaccinated not only the unvaccinated, but also the large proportion of the population who had by lapse of years and often of a long life to a great extent lost the protection against small-pox which their primary vaccination had formerly afforded.

Leaving this part of the report, we come to one which we imagine can afford no satisfaction to anyone. It consists of a long list of witnesses who came forward to explain that having what are termed conscientious objections to vaccination, they had, after a first conviction, been fined again and again, and in some cases had preferred repeated imprisonment to the payment of the fine. As to these persons, we would recall the fact that the Vaccination Committee of 1871 recommended in their report that "whenever in any case two penalties or one full penalty have been imposed upon a parent, the magistrate should not impose any further penalty in respect of the same child." This recommendation was adopted by the House of Commons, but it was rejected by the House of Lords. Further experience since that date will, however, probably result in some such limitation being set to penalties for the non-vaccination of a child, for it is evident that repeated penalties in most instances fail to effect their intended purpose.

To one point which has been raised in the reports issued the opponents of vaccination seem to attach great importance. It is that there are different opinions amongst different witnesses as to the precise source or sources whence current vaccine lymph was originally derived, some witnesses, indeed, admitting that they have no means of tracing it to its source. We confess that we see nothing very extraordinary in this. Not only are the early records incomplete, but in view of the ignorance which still prevails to this day amongst veterinarians and others as to the diseases which are associated with eruptions in the teats and udders of cows and calves, and which go by a general name of "cow-pox," it is difficult to conceive how there can have been any precise information on this point at the close of the last and the beginning of the present century. The one thing we do know is that vaccine-lymph, whatever its origin, has been proved to grant to people coming into the closest contact with small-pox patients an almost immediate immunity from that disease, and that its inoculation into the arms of infants has succeeded in doing away with small-pox amongst children, precisely according to the extent to which the prophylactic has been used. As yet, these pieces of overwhelming proof in favour of vaccination have not been dealt with by the anti-vaccinationists. Indeed, the points have been almost studiously avoided.

IN THE LANCET of June 7th last, page 1235, will be found a letter from a correspondent dealing with a grievance which Medical Officers of Unions wished to have ventilated. This grievance had reference to the decision of some borough magistrates, that, after May 1st of the present year, and in consequence of the provisions of the Lunacy Act, 1890, union medical officers should no longer be called upon to fill up the certificates of pauper lunatics residing in their districts. The decision at which the magistrates had arrived does not seem to be warranted by the wording of the section of the Act, although no doubt there is an element of ambiguity in it, which need not, however, have been taken in the narrower sense, to the professional detriment of a hard working and efficient body of medical practitioners, whose services are but ill requited at the best. The matter was recently brought officially before the Huddersfield Board of Guardians. It would appear that the clerk to the borough magistrates had addressed a letter to the Local Government Board, in which it was stated that "the justices of the borough, since the new Act came into operation, have deemed it desirable, in the interests of the pauper lunatic, that the medical practitioners should not be associated in any way with the relieving officers." The union medical officers not unnaturally resented this communication. In a letter to the board the medical officers say they have read with astonishment the letter to the Local Government Board, "implying that your medical officers are unfit to be entrusted with the duty of certifying in cases of lunacy, whereas some of us have been fulfilling these duties for thirty years and upwards without any blame. Had we been guilty of any such conduct as that imputed to us, surely the Lunacy Board and the asylum superintendents would have complained." They go on to say that "Section 13 (Lunacy Act, 1890), to which the clerk refers, does not apply to pauper lunatics, but to private cases, and it orders 'two medical practitioners' to certify, whereas, in the case of a pauper, 'one medical practitioner' is sufficient. (See Section 18.)" A resolution was moved to refer the question at issue to a sub-committee, but Mr. HELLAWELL, in some very judicious remarks, submitted that he did not think there was anything in the question to refer, and that so long as their medical officers performed their duties to the satisfaction of the Board, they ought to receive the support of the Board. He had no doubt the clerk had written his letter from a good motive, for they could not be too particular in safeguarding the liberty of the individual, and in private cases he believed that every precaution was taken. In the case of the pauper, the relieving officer reported it to the union medical officer. In the majority of cases the medical officer was acquainted with the case and its peculiarities, and he contended that it was very much to the interests of the lunatics that they should be certified by their own officers who knew them. The patient was afterwards examined by the asylum authorities, and they were only too anxious, when they were able, to send cases back. He had not the slightest doubt that if cases did occur where there was a difference of opinion as to the sanity of the individuals the guardians would be only too glad to have an independent medical opinion, but it was quite a different thing to change their practice because a magistrate's clerk had gone out of his way to cast a slur upon gentlemen who had served the Union for a generation at a paltry and miserable stipend.

We commend these sensible and outspoken remarks of Mr. HELLAWELL to the notice of all boards of guardians and magistrates who may feel themselves called upon to take action in the matter. Mr. HELLAWELL moved as an

amendment, "That this board has complete confidence in its medical officers, and is of opinion that the course adopted in the past should be continued in the future." The amendment was carried by 28 votes to 12—a decision which ought materially to strengthen the case in favour of union medical officers where their rights are unduly and undeservedly called in question by an ungenerous interpretation of the statutes.

The conclusion at which the Huddersfield board of guardians have arrived in this question quite bears out the general expression of opinion that has reached us from our correspondents, and we do not think that the new Lunacy Act was intended to be the means of introducing, without reason and upon no justifiable grounds, a change in the practice which had hitherto been found to operate successfully and for the best interests of the class of lunatics in question.

THE records of criminal abortion have seldom, if ever, furnished such dismal disclosures as those made at the Central Criminal Court before Mr. JUSTICE GRANTHAM on August 1st and 2nd, whether medically, socially, or morally considered.

The deceased, GRACE ETHEL HALL, who was living apart from her husband under a deed of separation, contracted a *liaison* with an officer in the Bombay Staff Corps, named DE PONTHIEU, and by him became enceinte. From a twofold motive probably, viz., to get rid of her shame, and to save herself from forfeiting an allowance from her husband conditional on her chastity, she lent herself to the nefarious practices of the convict LAERMANS. The latter was practising at 116, Pimlico-road, under a diploma which he represented as having been legally obtained from the Free University of Brussels, but which in reality was a forged licence. By whom the deceased was introduced to LAERMANS was left in doubt by the evidence adduced at the Old Bailey. Whether it was by her paramour or the woman GRANDT, or some other person, was not proved. Mrs. HALL when dying made a confession to her regular medical attendant, Dr. PHILLIPS, which went to show that on two occasions she underwent a "pricking operation, and subsequently that some fluid was injected into the vagina by the convict. This statement, however, could not be received in evidence, since it was not made under the conditions which the law requires to render a dying deposition valid testimony. Dr. PHILLIPS, partly from the communication made to him and partly from the result of his own observations, very properly refused to give a death certificate. During the few days that elapsed between her last visit to Pimlico-road and her decease she suffered *inter alia* from hæmorrhagic diarrhœa, which LAERMANS represented to those in attendance as dysenteric. Fortunately for the cause of justice, this abortion-monger was arrested on a charge of forgery before Mrs. HALL breathed her last, and thus it was that the aid of Dr. PHILLIPS was sought. At the post-mortem examination made by Mr. PEPPER, it was clear that some corrosive fluid had been introduced into the vagina, the walls of which were almost uniformly in a leathery condition. The neck of the womb was acutely inflamed and filled with blood-stained ropy mucus. The corrosive had acted also with great intensity on the lips of the os uteri. There were no detectable signs of mechanical injury. The decidua was partially separated from the uterine wall by extravasated blood, clearly indicating that had the deceased lived much longer abortion would have ensued.

There was entire absence of proof that the corrosive had been employed for the purpose of destroying a venereal sore, or that a polypus had been removed, as suggested by the defence. Internally, no organic disease was discovered beyond the results of recent acute inflammation, and these were referable directly or indirectly to the method employed to procure abortion. The lower fourth of the small intestine and the whole of the large intestine presented an appearance that left no doubt that the lesion was due to mercury absorbed into the system. The stomach and upper three-fourths of the small intestine were to all intents and purposes normal, thus proving the mineral had not gained entrance therefrom. That it had been taken up by the vaginal mucous membrane seemed apparent. Weight was lent to this view by the finding in LAERMANS' room of a bottle containing a quantity of acid nitrate of mercury. Whether from culpable negligence or from loss of self-control incidental to a drunken orgie—for previously to injecting the fluid he seems to have joined deceased and the woman GRANDT in drinking green Chartreuse and champagne—he used a fatally dangerous quantity is not clear. It can hardly be supposed that he was ignorant of the local corrosive and general toxic properties of the drug. It appears likely that he intended to use just as much as would cause contraction of the uterine wall, but unhappily the sequel shows only too obviously that this was greatly exceeded. As counsel for the defence remarked, he would not intentionally employ in large quantity so potent a chemical, and one which might be easily recognised by its results and by analysis. As laid down by Lord BRAMWELL, a person who causes the death of a woman by the induction of criminal abortion is guilty of murder characterised as "constructive," as distinguished from intentional homicide. Against this interpretation of the law it is urged that there is no malice aforethought, that the criminal not only does not desire to compass the death of the woman, but has every reason that it should not ensue. Hence it is that the judges, in their summing-up in such cases, generally leave the alternative between murder and manslaughter to the jury, and the jury from humane motives adopt the latter. Moreover, where a verdict of murder is returned the death sentence is usually commuted to that of penal servitude. It is curious how unequal are the sentences upon criminal abortionists in different cases. Within the last few years a medical man got ten years' penal servitude for an ineffectual attempt, and that, too, without the life of the woman having been sacrificed; whilst in another case where the prisoner was convicted of having caused the death of one woman, and indicted for that of another, the same punishment was inflicted. This would seem to show that it is the motive rather than the accomplished deed which is held to be the great offence. The sentence of fifteen years passed upon LAERMANS is not, we think, too severe. A crime of such enormity unquestionably deserves exemplary punishment. The remark made by the judge on his summing up, and the rider to the

verdict of the jury, must be read as a severe reflection upon the conduct of other persons implicated in the melancholy episode of Mrs. HALL'S death.

SOME time ago we animadverted on the possible dangers to sanitary reform in rural Scotland, as shown in the various proposals appearing in the daily press and elsewhere regarding medical officers and sanitary inspectors. Appalled by the existing confusion, the Council of the important county of Lanark seems to have felt itself so hampered in carrying out its intentions in reference to public health appointments that it ultimately determined to delay further action until it obtained an answer to a request made to the Board of Supervision "to give some assurance that (on the understanding that the County Council and district committees in organising their arrangements under the Public Health Act shall, so far as they deem this can be judiciously done, employ members of the existing medical and sanitary staff in their respective districts) the Board of Supervision will agree to the services of the remaining officers being dispensed with, on the footing of their receiving compensation for the loss of office, in terms of the Local Government Act." The Board, recognising the importance of the question, very properly took the advice of counsel on the matter, and, very properly also, of three leading members of the Scotch bar, who were called in for this purpose; one was the Lord Advocate, who had charge of the Local Government Bill in its passage through the House of Commons.

Strictly speaking, the reply to the question of the Lanark County Council is in the negative; but for all practical purposes it should, excepting for one possible difficulty, be considered quite satisfactory. It will be noted that in the question as put by the Council, there is no reference to any proviso that the Board of Supervision should be satisfied with the sufficiency of the sanitary staff which the Council might propose to appoint in lieu of the existing officers. But the legal opinion is that this is a necessary element in the case. Probably the Council, being perfectly satisfied of its own determination to employ a large enough number of sanitarians, both lay and medical, did not dream that this aspect of its action would need to come under the criticism of the Edinburgh Board. But we do think it quite a proper enactment in any national scheme of public health administration that provision should be made whereby any tendency to insufficiency in the number or in the quality of the officials appointed by any local body should be subject to review by a properly constituted central board. But this is exactly where our Scotch friends find that the shoe pinches. They have, most of them, little or no faith in their Board of Supervision. And no wonder. For the Board was created some forty years ago solely for Poor-law purposes, and consists mainly of several sheriffs and provosts, who, in the face of threatened epidemics, are empowered to add unto themselves a couple of sheriffs more. No medical man has ever been a member of the Board, and its notion as to what constitutes a proper medico-sanitary staff may be judged of by the fact that for supervision of the whole of Scotland it employs a fraction of the time of a single medical man—and a thoroughly competent man he happens to be—at a remuneration of £200 a year. Nor, if we look for a further indication of the views of the Board regarding the carrying out of the Local Government Act, does the prospect improve. For, as we pointed out in the article already referred to, the Secretary of the Board has propounded a scheme whereby the present staff of parish medical officers, at a mean—*mean* in a double sense—salary of £4 10*s.* per annum, should be in effect retained, with the addition of half a dozen principal medical officers at a salary of £500 each. At the same time, we are entirely of opinion that no existing officers should be dismissed without proper compensation, and we think it quite likely that it might be advantageous to retain the services of many of them for local purposes.

The counsel engaged by the Board have informed it that they are "of opinion that the Board ought to consent to the removal of any individual inspector [or medical officer] on being satisfied that the office he holds is unnecessary"; and, further, that "looking to the reorganisation which is contemplated by the Act.....we think it is the duty of the Board to facilitate this reorganisation by consenting to the removal of any existing inspector [or medical officer] on being satisfied that his office is unnecessary," and again, they "consider that the inspectors do not hold their office *ad vitam aut culpam*, and it would be unfortunate if they did, as this might very seriously impede the introduction of the new arrangements." All this is quite satisfactory, and looking to the very moderate medical requirements of the Board at its own headquarters, it is hard to see how it can seriously interfere with the action of the County Councils in arranging their sanitary staff. But though the Lanark Council, for example, may have a suspicion that the Board has too great a hankering after the retention of the services of the parish doctors, we think its duty clearly is to go forward to the Board with a complete scheme, and to demand that it receive a fair and just consideration. Probably the wisest preliminary step for each county or group of counties to take would be at once to appoint a chief medical officer, who would be taken into the confidence of the Sanitary Committee and would advise and guide it in regard to the retention or dismissal of local men and the preparation of a scheme for presentation to the Board of Supervision.

We regret to observe that Caithness and Sutherland have been unable to see their way to offer more than £400 a year (with an allowance for expenses) as salary to their officer, and we particularly regret that in the advertisement referring to Ross and Cromarty a loophole seems purposely to be left for the elected officer to hold other appointments or engage in private practice. The principle involved is a bad one, and it is to be hoped that the example will not be followed. Coming further south, it is gratifying to find that Renfrewshire, with a rural population of only 70,000, and a rental of only £250,000, has agreed to offer £500, with £100 for travelling allowance. If Renfrewshire can afford to give this amount, it is to be hoped that large and populous counties like Lanark, Ayr, and Perth, with rentals of from £800,000 to £1,300,000 per annum, and the larger combinations of counties like Dumfries, Kirkcudbright, and Wigton, will show that they have an

adequate sense of the importance of getting the best available men by offering salaries—say, of £800 as in some English counties—commensurate with the importance of the offices. The fact that in the Local Taxation Bill, now passing through Parliament, £15,000 has been set apart to aid Scotch County Councils and town councils to pay their sanitary officials, should remove any hesitation regarding this question of salaries that may up till now have remained in the minds of even the most economical county councillors.

EIGHTEEN months have now elapsed since the method of treating locomotor ataxy by suspension was brought before the profession. It is true that its inventor, Dr. MOTCHOUTKOWSKY of Odessa, had proposed it five years earlier, but until Professor CHARCOT had given it his powerful support knowledge of the method was limited to a few. As soon as the glowing accounts of MOTCHOUTKOWSKY and CHARCOT were published in this country physicians made haste to give the method a trial. As is usual, when any new and more or less sensational mode of treatment is introduced, letters appeared in the journals almost weekly from one medical man or another stating that they had tried the method on one patient, with a successful result. Later in the year more cases were published, not singly, but in short series; and it was evident that the improvement was by no means uniform, many even of the cases which physicians thought it worth while to publish remaining without benefit.

In the current number of *Brain* Drs. RUSSELL and TAYLOR contribute a particularly able paper, read before the Neurological Society, dealing not merely with the published results of others, but with the result of forty-two cases which were suspended under their own observation, including thirty-six cases of tabes. Articles by the same authors were, it will be remembered, published on this subject in THE LANCET of Oct. 19th, 1889, and Feb. 1st, 1890. The proportion of improvement in the cases of other observers up to that time was 67 per cent., while in their own it was only 18 per cent., and a considerable proportion of cases became worse. Since the paper was read, further results have been published in this country and in Germany, which approximate much more closely to the negative results of Drs. RUSSELL and TAYLOR than to the more encouraging reports of earlier observers. For instance, ROSENBAUM recently brought before the Berlin Medical Society the results of the treatment of eighty-five cases in Professor MENDEL'S wards; 2500 suspensions were practised on these eighty-five cases, with improvement in twenty-five only. The improvement was most marked in Romberg's symptom, and in the ataxy. In the discussion which followed, LEYDEN stated that he considered the treatment was comparable to the once fashionable and now discarded treatment of locomotor ataxy by nerve-stretching, a mode of treatment which bade fair, judging from the enthusiastic reports of those who practised it, to rescue tabetic patients from both their pains and their ataxy. Gradually, discouraging reports appeared, relapses were frequently heard of, and the operation at present possesses chiefly a historical interest, and in this country, at any rate, a surgeon is rarely, if ever, asked to see a patient suffering from locomotor ataxy with a view to stretching his nerves.

The natural history of locomotor ataxy must be carefully borne in mind in estimating the value of any mode of treatment. The term "progressive," which is often prefixed, is applicable, as Dr. GOWERS has shown, to only half the cases. In the remaining half the symptoms may remain stationary for years, or there may be marked remissions and fluctuations. The symptoms which almost invariably remain constant are the loss of knee-jerk, and the Argyll-Robertson pupil; disturbances of the function of the bladder and rectum, when present, rarely improve much; while the pains and the disturbances of coördination exhibit the utmost variation from time to time under any treatment, or even under none. There are members of our own profession still actively engaged in their work in whom the disease has become quiescent, and has shown scarcely any indications of progression for six, ten, and even for nearly twenty years. At present no parallel series of cases have been published of a large number of patients treated by suspension and of an equal number treated without it; but we imagine the percentage of cases improved in the first group would surprise those who were not in the habit of seeing a considerable number of cases of the disease. Reference was made by Drs. RUSSELL and TAYLOR in their paper to a case recorded by Dr. CHURTON, in which most marked improvement occurred while the patient was waiting for the suspension apparatus to be made, and where, had the treatment been already commenced, the amelioration of the symptoms would have been attributed to the beneficial effects of suspension. Some months ago, in commenting on the discussion on the mechanism of suspension at the Royal Medical and Chirurgical Society, we pointed out how inconsistent with each other and with accepted facts were the various explanations of its mode of action which had been offered; and further information and observation have strengthened us in the belief that the improvement observed is, in the main, due to the mental effect produced by the novelty of the method, and the imposing apparatus employed; and also, in no small degree, to the fluctuations which characterise the disease in a large proportion of cases.

There are several fallacies which must be carefully avoided in estimating the extent to which the improvement observed is to be attributed to the suspension. Among the cases reported as having improved a number appeared to have been actively treated by drugs, such as iodide of potassium, whilst undergoing suspension, while in the less favourable series reported by Drs. RUSSELL and TAYLOR the treatment was not complicated in this way. Another fallacy may arise from the circumstance that the diagnosis of locomotor ataxy is by no means always easy until after prolonged observation. Before the paralysis caused by alcoholic excess was shown to be due to peripheral neuritis and the symptoms carefully described many of the cases were supposed to be cases of locomotor ataxy, and the name "pseudo-tabes" is still frequently used in American journals as synonymous with alcoholic neuritis, the term being an indication of the way in which the diseases were frequently confounded. More than one of the cases described as being practically cured by suspension were almost certainly, judging

from the clinical records given, cases of multiple neuritis. Dr. WOOD of Philadelphia has recently drawn attention to another affection, the symptoms of which almost exactly simulate those of locomotor ataxy. In the first case he observed there had never been a doubt about the diagnosis till the necropsy was made, when the characteristic lesions of tabes were absent, but there was an infiltration, evidently of a syphilitic character, along the posterior part of the spinal dura mater, involving the posterior nerve roots. As so often happens, it was not long before an exactly parallel case came under observation, and, profiting by his recent pathological experience, Dr. WOOD treated his second case actively with antisyphilitic remedies, and a cure was the result. It is quite possible that some of the cases which improved so remarkably with suspension *plus* iodide of potassium may have been of this nature. It is probable that such an infiltration along the posterior nerve roots may be the cause of the permanently ataxic gait, which is occasionally seen in patients after recovery from paraplegia dependent on Pott's disease of the spinal column, and one cannot avoid a suspicion that the case which suggested the treatment to MOTCHOUTKOWSKY may have been of this nature. The patient is said to have been suffering from spinal curvature and ataxy, and after only one suspension in SAYRE'S tripod and the application of a plaster jacket, his pains were relieved and the ataxy practically cured. In other patients MOTCHOUTKOWSKY found no improvement from wearing a jacket, but a number improved while undergoing a course of suspension.

Time has not been more kind to this mode of treatment than to many others which have been introduced to remedy intractable diseases, and carried out at first with singular enthusiasm and apparently good results, but which later on have disappointed the hopes they have raised and gradually fallen into disuse. Before long we expect that the suspension apparatus will be relegated to obscurity, along with PERKIN'S metallic tractors of a past generation, and BERJEON'S apparatus for the rectal injection of sulphuretted hydrogen for the cure of phthisis in recent times.

Annotations.

"Ne quid nimis."

AN APOLOGY FOR THE OUT-PATIENT DEPARTMENT.

WHATEVER Sir Andrew Clark does he does thoroughly, and it is this thoroughness that gives his opinion great weight with the public. It is so with his defence of the hospital system. His speech last year at the Mansion House was probably the most effective that has yet been pronounced in this great cause, though it has been well followed by Mr. Hutchinson's speech on a similar occasion this year. Sir Andrew Clark, in his defence of hospitals, included the out-patient department, and minified the abuses with which it is generally charged. In his recent evidence before the Lords' Committee he repeated with the same heartiness his defence of the out-patient department, and has given it as his opinion that the shutting-up of this department of a general hospital would be the greatest calamity that could happen to the public, and most disastrous to the art of medicine. The advantages it secures, in his view, are that the very profusion of cases gives the opportunity to the physician and the students of seeing, handling, and becoming familiar with disease in all its forms, and in its earlier stages. Sir Andrew Clark insisted, too, on the importance of the out-patient department for educational purposes. He used to work four or five hours in the out-patient department without difficulty, and now such work was much facilitated by each out-patient physician having a qualified clinical assistant and other helps. The educational value of the out-patient department is the chief argument with which its critics are confronted. But it is not so formidable as it looks at first sight. If the out-patient department were abolished to-morrow, the opportunities of seeing disease on a large scale would not be altogether abolished. The student might, by attending dispensaries, or putting himself into the position of a pupil to a general practitioner, see ordinary diseases in all their stages, and with a certain continuousness which is not secured in out-patient practice. But it is not proposed to abolish the out-patient system altogether, but only to greatly curtail its proportions. It would still remain; but the cases would be much fewer and would receive an increased amount of attention, and the educational value would be correspondingly greater. The great blot of the present system is that it demoralises the patients by making them recipients of medical charity for ordinary ailments, and at the same time injures the general practitioner. It is difficult for a man in Sir Andrew Clark's position to realise how dark this blot appears to men who lay themselves out for practice among the humbler classes, whose lives are most laborious, and whose remuneration is at all times disproportionate to their toil. We hold that every working man, especially one with a wife and family, should have a medical attendant retained on some understanding, available at all times, by night and day, and to whom he can look as confidently for help as a richer man does to his private medical adviser. Medical education can be carried out without sapping the independence and the self-respect of the working-classes; and the great arguments for hospitals, so lucidly set forth last year by Sir Andrew Clark, would remain if these out-patient abuses were remedied. With his views of special hospitals and his objections thereto we heartily concur.

"EVERY MAN HIS OWN DOCTOR."

SELF-TREATMENT is no new practice. We cannot doubt that it has been employed for the cure of disease in all ages. It did good when perchance it hit the mark; it haply did no harm when it merely missed what were better let alone. Evil it has done, and is daily doing, and this to no trifling extent. We need not quote illustrations. The records of coroners' courts afford many such. Little favour, therefore, can be claimed by those who seek, by means of popular handbooks, to instruct the casual reader in details which bear not only on the preservation of health, but on the recognition and the treatment of disease. This is no mere matter of household hygiene. If it implied no more than such necessary teaching its useful purpose and its advantages could not be gainsaid; but it aims at further and more perilous chances. The accurate management of one's own case in sickness may be said to demand even more than skilled medical opinion. It requires that such opinion should be used objectively. We admit that this fact is not duly recognised even by all medical practitioners, and its force undoubtedly is in their case not so great as in that of less instructed persons. Cool and shrewd self-observation, combined with exact professional knowledge, will go as far as anything can to justify subjective therapeutics. Yet even medical men have repeatedly paid the death penalty for incautious reliance on such partial experience. They have, in spite of ample skill, misunderstood and sacrificed themselves. The obvious lesson afforded

by their example hardly needs to be insisted on. The layman's case is different, and the difference is not in his favour. His attempt excels in its temerity, for the safeguard of medical training which alone can even seem to justify self-treatment is absent. The prospect of success is in most cases immeasurably less. Let him therefore be content to seek self-preservation by following a rational rule of daily life, without essaying further and hazardous efforts at self-cure. Life and health are worth more than blind efforts of this kind, and the mere pocket economy which comes of "doing without the doctor" is dearly purchased at the cost of health.

VACCINATION AT KEIGHLEY.

THE Keighley School Board have unanimously objected to the Education Department's requirement that pupil teachers should be vaccinated, on the ground that this is making the Board do the work of the vaccination officer, and that in a town like Keighley it would virtually deprive the Board of local teachers, because of the insignificant proportion of the town children who for many years past have been submitted to the operation. If this is a correct statement of the condition of the Keighley population in regard to vaccination it is obvious that none but well-vaccinated persons should undertake the office of school teacher. Sooner or later Keighley will be attacked with small-pox, and the younger members of the community will suffer exceptionally severely. The position of a school teacher unprotected against small-pox would under these circumstances be one of considerable risk, and for this reason there is greater need for compliance in Keighley with the requirement of the Education Department than there would be elsewhere. There is only one argument the Keighley School Board can urge—viz., that it may be anticipated that during an epidemic prevalence of small-pox in that town it would be impossible to continue school attendance, and therefore the illness of the teacher would be of less moment.

INNERVATION OF THE HEART.

AN interesting series of observations, confirming those of Gaskell, have lately been made by E. Romberg and W. His, jun., on the innervation of the heart. These observers adopted the method of examining fœtal hearts. The nerves of the heart begin to appear at the end of the first month. They arise from the wandering ganglion cells of the sympathetic system. The fibres which unite these cells with the sympathetic trunk run in companionship with branches from the vagus; with this latter nerve, however, the ganglion cells have no communication. Later on in fœtal life, sympathetic ganglion cells are found in the walls of the heart itself. The cardiac nervous system, the formation of which takes place during the second and commencement of the third month, is formed as a plexus on the posterior aspect of the ascending aorta (plexus aorticus profundus); this gives branches to the ganglia of the auricle, and also sends branches to a plexus, rich in ganglion cells, between the ascending aorta and ductus Botalli (plexus aorticus superficialis). From the latter is derived the plexus coronarii. The ventricle has no ganglia. The cardiac ganglia, then, owe their origin to the sympathetic ganglia; these latter belong, according to the researches of Onodi, to the divisions of the posterior roots, therefore to the sensory tract. Thus the ganglia of the heart are also derived from the same source. The cardiac ganglia possess no motor functions; they are neither automatic centres for the heart, nor have any action in inhibiting or slowing the heart beat. If we accept the results of these observers as correct, the physiology of the heart's action can be satisfactorily explained. They point out that Redner emphasises the fact that the heart of the embryo executes rhythmical contractions long before it possesses nerves or ganglia, and he is confirmed in his statements by the researches of Wooldridge. Concerning the function of the cardiac ganglia themselves, Romberg and His say little. They suggest that they possibly may transmit impulses to the central nervous system, which govern by reflex action the movements of the heart through the paths of the vagus and accelerans, and likewise regulate the calibre of the bloodvessels. If we must give up the idea of an automatic nervous system for the heart, we must provisionally accept as an explanation of its rhythmical action an automatism of the heart muscle, which may help to explain many of the anatomical and physiological difficulties which have never been satisfactorily disposed of. If these views be correct, the heart's muscle must be taken as the automatic motor power of the circulation, without deriving its movements from nervous elements. There has always been an uncertainty in ascribing certain irregularities of the heart's action to morbid conditions of the ganglia, but it is easier to imagine that the cardiac complications of typhoid and diphtheria are due to changes in the muscular elements than that the ganglia are at fault. The condition of the heart's muscle will now be a very important factor in the pathology of disease of that organ.

MORTUARIES IN LONDON.

THE need for mortuary accommodation in the metropolis has long been matter of notoriety. Although in some parishes mortuaries have been erected, but little progress is made generally by the vestries and district boards to provide themselves with proper accommodation for the temporary disposal of the dead, notwithstanding the fact that they have had the necessary power for nearly a quarter of a century. Under the Public Health Act of 1875, the Local Government Board is enabled to compel sanitary authorities in the provinces to provide mortuary accommodation, but in London this power does not exist; it is one that should be supplied when the Public Health Acts relating to the metropolis are amended. The London County Council are now applying for powers to provide and maintain two mortuaries in the metropolitan district for the deposit of unidentified corpses. There can be no doubt that these will serve a useful purpose, and that they will give facilities for the recognition of the bodies which at the present time are buried unclaimed.

THE HUMAN SUBJECT FORTY YEARS UNDER WATER.

A VERY interesting report has just been issued by Dr. König, "Gerichtsarzt" (judicial physician) of Hermannstadt, on the state in which the human subject, after forty years' immersion in water, may be found by the physiologist. In the revolutionary upheaval of 1849, a company of Honvéds, as the Hungarian militia are called, having fallen in the vicissitudes of war, were consigned to the waters of the Echoschacht, a pool of considerable depth not far from Hermannstadt. After some forty-one years their bodies have been brought up again to the light of day, and subjected to a careful and minute investigation from the physiologist's point of view. Dr. König found them in perfect preservation, without a single trace of any decomposing process. Externally, they had the appearance of having been kept in spirit, like so many preparations in an anatomical museum. The epidermis was of a whitish-grey colour; the muscles rose-red, feeling to the touch like freshly slaughtered butcher's meat. All the inward parts—the lungs, the heart, the liver, the spleen, the kidneys, the bladder, the stomach, the alimentary canal — were of the consistence of those in a newly

deceased corpse; while the brain was hard, of a dirty grey colour, as if preserved in spirit. Structurally, the organs retained their outline perfectly, and were so easily recognisable in tissue as well as configuration that, according to Dr. König, they might have been exhibited for "demonstration" in an anatomical lecture room. After forty-one years under water this is indeed a remarkable phenomenon. The large intestine contained fæces of a yellowish-brown colour, quite unaltered and quite inodorous; while the bladder was partially filled with straw-coloured urine. But perhaps the most significant feature disclosed by these corpses is the following:—In their interior abundant chloride of sodium, crystallised in cubes, had been deposited and fixed on the several tissues and organs, and these salts had not penetrated, mechanically, into the dead bodies from without. In the completely closed and perfectly unimpaired pericardium of the corpses on the inner pericardial aspect, and also on the outer surface of the heart itself, salt crystals of the same kind, to the weight of five grammes, were found adherent. This, according to Dr. König, clearly shows that, in the water, particles held in solution may pass through the skin and the muscles, and find their way into the most deeply-seated organs. Herein, he adds, we have confirmatory proof, if such were needed, that the specific virtues of mineral baths exercise in this way their salutary effect on the internal economy of the invalid bather. There is a notable difference, however, between the time spent in the bath by an ordinary bather at a "Curort" and the forty-one years during which the Honvéds remained under water. The phenomenal stillness of the Echoschacht may also have been a material factor in this impregnation of the corpses with the chloride of sodium. But, with every allowance for such considerations, Dr. König has furnished a striking illustration of the permeability of the immersed human subject to salts in solution, and we hope his painstaking researches will lead to others in the same important direction.

THE MIDWIVES' REGISTRATION BILL.

THERE seems every prospect that this Bill will not be proceeded with this session. The Bill, as amended by the Committee, is a great improvement on the first Bill. But there seems reasonableness in the demand that more time should be given for the consideration of further amendments than can possibly be found at this stage of the session. Dr. Rentoul, who seems to have come to the conclusion which most responsible people have reached, that some legislative restriction of practice by midwives must be secured in the interest of women, has, with his usual energy, contended for delay. He has also certainly pointed out faults and defects in the Bill which it may be possible to amend before next session. The Bill stands low down in the orders of the day, and few days now remain. On all these grounds we hope the promoters of the Bill will agree to its being withdrawn, to be reintroduced next session.

THE GUILD OF ST. LUKE.

BESIDES bringing a large annual revenue to the medical charities, Hospital Sunday has effected much good in bringing members of the medical profession into closer harmony with the clergy and ministers of all denominations. The various local committees which receive and distribute the funds, though composed of members of all creeds, work most harmoniously together, forming, indeed, a happy contrast to committees composed of less differing members. It has tended to disprove the charge so often made against members of the medical profession that they are an irreligious body of men—a charge as untrue as it is uncharitable. On the contrary, many are most regular attendants at church or chapel, notwithstanding the sacrifice which this undoubtedly involves—a sacrifice not experienced by members of the legal profession. "No day of rest for him, but day of care," may be said of many a doctor's as well as a curate's Sunday, and it is literally impossible for many a one to attend morning service. Patients have to be visited even on Sunday; children are born on that day as well as on other days of the week; and many a practitioner who would thankfully accompany his wife and family to the house of God must perforce forego that duty to fulfil another more imperative. A certain number are members of the Guild of St. Luke, testifying their sense of the religious obligations devolving upon them by the observance of certain rules. It is unfortunate that the word "guild" has still a deterent effect, acting upon some minds much in the same way that a red rag is supposed to act upon a bull. Might not this be removed by an enlargement of the guild's operations? Instead of being limited to members of the Established Church, or even to a party of it, could it not embrace all members of the medical profession holding any variety of Christian belief? Could not the Sunday before or after St. Luke's Day (Oct. 18th) be set apart as a day for the more special observance of the "beloved physician's" anniversary and a collection made for the Medical Benevolent or some other well-recognised medical institution? Until St. Luke's Day is made a general holiday, which it is never likely to be, it will be impossible for more than a select few to observe it by attending any place of worship. The preceding or succeeding Sunday is not open to the same objection. Many members of the profession would always attend and probably the numbers might be increased. The writings of the Evangelist would form a fruitful subject for many a sermon, and the more general observance of the bond between Christianity and the profession of healing could not fail to have a beneficial effect upon clergy and ministers, members of the medical profession, and laymen.

THE DIAGNOSIS OF FEVER CASES.

SOME members of the profession in Glasgow are dissatisfied with Dr. Russell for bringing the subject of Errors of Diagnosis before a body of laymen. They admit the interest of his statement, and are glad to have errors pointed out; but they maintain that the statement should have been made to medical men themselves as the persons blamed, and as capable of appreciating the difficulties of diagnosis, and of answering the medical officer of health. Dr. James Hamilton is the chief exponent of this somewhat strong feeling, and introduced the subject for discussion lately to the Glasgow Southern Medical Society. The chief points in the reply to Dr. Russell's statistics are that some of the errors were not excessive; that it is understood that the sanitary authority, or the medical officer of health, wishes for an early isolation of suspicious cases—seen, as a rule, only once,—and that in such cases practitioners are led to suppose that their diagnosis would be revised by the superintendent at Belvidere; that errors are made in Belvidere as well as by outsiders; and, above all, that the proper course for securing the best results and a cordial coöperation between the sanitary authorities and the medical profession is for medical officers of health to communicate directly as to errors with those who make or can explain them. There is a great deal of force in these remarks, and we do not doubt that they will receive, as they should, every consideration from Dr. Russell, who, everybody admits, can only have had the good of the public and the profession in view in the course he took. On one point we advise the profession strongly, and that is not to certify to please "the authority" or anybody else

before they have fully made up their own minds. One visit to doubtful cases is quite insufficient to enable or to justify notification. In some cases two will not suffice. We suspect that the overlooking of this fact has not a little to do with the errors that are complained of. The remedy is to take more time. There is no royal road to sound diagnosis. It takes time and a certain development of the disease, and it is infinitely better that two or three days more should be taken to make sure than to decide on insufficient data. Under a notification system the medical man himself is responsible, and cannot transfer his responsibility to the superintendent of the fever hospital. We should be very sorry indeed if this discussion had the effect of preventing Dr. Russell from indicating in future errors of diagnosis. That would be a great misfortune, both for the profession and the public. Dr. Hamilton himself, we are glad to see, says that Dr. Russell's report is a most interesting one, which ought to be welcomed, and even repeated. We think so strongly; and not in Glasgow alone, but other health officers in other communities will confer a favour by presenting to the medical societies of their neighbourhood a periodical report of such a nature. The discussion of errors is one of the best ways of preventing their recurrence.

THE BERLIN CONGRESS.

OUR contemporary the *Berliner Klinische Wochenschrift* dedicates its issue of the 4th inst. to the Tenth International Congress, in an address of welcome, and in the publication of papers contributed from many countries. Thus the first article is by Professor Dujardin-Beaumetz of the Hôpital Cochin, Paris. It is on Dilatation of the Stomach as a cause of Neurasthenia, and is in French. From the Naples clinic Professor Cantani describes the Antifebrile Effect of Abundant Water-drinking and of Cold-water Enemata. From Buda-Pesth Dr. Koryani discusses the Influence of Dress on the Occurrence of Floating Kidney in Women. From the Leyden clinic Professor Rosenstein writes on the Diagnosis of Aortic Aneurysms. Dr. A. C. Bernays of the surgical clinic of the College of Physicians and Surgeons of St. Louis, U.S.A., relates five cases of Gunshot Wound of the Abdomen in which laparotomy was performed, three recoveries, two deaths. Dr. Reeves Jackson of Chicago relates (in English) how Mr. Lawson Tait recently amputated the pregnant uterus. From the Warsaw clinic Dr. Stanislaus Klein details an interesting case of Pseudo-leukæmia with cirrhosis of liver and relapsing pyrexia. Lastly, from Copenhagen there is a contribution by Dr. Faber on the Pathogenesis of Tetanus. It was a happy thought of our contemporary to thus signalise the international gathering in its city.

CHOLERA PROPHYLAXIS IN ITALY.

AMONG the nations of the Continent, Italy has hitherto been conspicuous for her belief in quarantine and sanitary cordons as the most effective means of averting cholera from her shores. And even now, when their efficacy has been shown, by her highest hygienic authorities, to be more than doubtful, she continues to favour them if only for the "sense of security" they give to her uninstructed populace. Concurrently, however, with these traditional, if not exploded, measures, she is developing activity, in a far more promising direction—that is, in a vigilant censorship of the food-supply. For years past the meat, the vegetables, and the alcoholic beverages have been in many large towns throughout the peninsula sold to the poorer classes when in a state unfit for consumption; but, thanks to the new Sanitary Code, the public health officers have been most stringent in the exercise of the powers given them by that enactment for the confiscation of such articles, and the punishment of their vendors. How far the evil had been allowed to go may be inferred from the fact that one can hardly open an Italian newspaper without coming on one or more announcements of the sequestration of food or liquor stores, which, if permitted to to be sold, must have injured the health of the consumer. The *Opinione*, for example, a leading Roman journal, tells us that in one fortnight the Officio d'Igiene has sequestrated in that city 245,300 chilogrammes of fish, 1742 of vegetables, 2750 of fruit, and 32,700 of mushrooms, while the tradesmen in whose shops these articles were on sale have had their names and addresses published in the most conspicuous fashion possible. Similar seizures of confectionery and fancy beverages, such as are largely consumed throughout Italy in the summer season, are also reported in a Florentine journal—the *Nazione*,—again with the names and addresses of the fraudulent vendors. All this should have a salutary effect on the Italian poorer classes, not only in view of cholera invasion, but of the maintenance of health at a high standard. In the memorable visitation of cholera in 1884, the ravages it made among the Neapolitan proletariat were distinctly traced not only to panic, but, primarily, to the unsound macaroni and the putrid vegetables, which made them "candidates" for the disease. Now this source of danger is in a fair way of being minimised—all the more that, as we see from an official rescript, the *personnel* of the sanitary office is being rigidly supervised, so as to obviate the temptation—not unknown in poor countries—of the enforcer of the law conniving, for a "consideration," at breaches of the same. Italy, indeed, is doing now what she should have done long ago, and will reap the reward, not only of keeping epidemics at bay, but of receiving a larger measure of that tourist population whom her backward hygienic system has hitherto tended to warn off.

THE LATE SIR WM. HOFFMEISTER.

THE funeral of Sir William Hoffmeister, late Physician to the Queen at Osborne, took place on Saturday, Aug. 2nd, at Cowes. Among the large number of mourners, General Sir Henry Ponsonby, G.C.B., attended to represent the Queen; Lord Colville of Culross, the Prince and Princess of Wales; Sir John Cowell, the Duke and Duchess of Edinburgh; Colonel Beecher, the Duke and Duchess of Connaught; Colonel the Hon. H. Byng, Princess Christian, Princess Louise, Princess Beatrice, and Prince Henry of Battenberg, the Duchess of Albany, and Empress Frederick of Germany. Two beautiful wreaths from the Queen, and one from each of the other members of the Royal Family, were among the numerous tokens of esteem and regret.

PNEUMONIA AND BLOODLETTING.

M. CROCQ, who has frequently written and spoken in favour of the revival of venesection, made a powerful speech dealing with this subject at a recent meeting of the Belgian Académie de Médecine. Speaking of pneumonia, he declared his disbelief in the cause of the disease being either Friedländer's bacillus or the diplococcus of Fraenkel and Weichselbaum. Inoculation of this latter microbe, he remarked, is said to procure immunity from subsequent inoculations, which is exactly contrary to the effect of an attack of pneumonia, for it rather predisposes the subject to subsequent attacks. Again, M. Crocq injected sputum from pneumonic patients, in which the diplococcus had been found, into the lungs of four rabbits, but none of them contracted pneumonia. Lastly, in a doubtful hospital case the sputum was examined and found to contain the diplococcus, but at the post-mortem examination no pneumonia was discovered. M. Crocq has never met with any cases of contagion in pneumonia, and Finckler's cases he considers

were not pneumonia at all. Moreover, Fraenkel's microbe is found in affections which are neither pneumonia nor contagious. The mortality usually reported by other observers in pneumonia varies greatly — that is to say, from 5 to 35 per cent. M. Crocq has no mortality at all. He arrests all his pneumonia cases by bleeding. Rheumatic fever, and even puerperal metro-peritonitis, he treats in the same way. The latter, he declared—amidst tokens of dissent,—can be thus cured in the great majority of cases. "Never," he went on, "have I regretted having bled a patient, though I have often been sorry that I have abstained from doing so. ..... If I were to be forbidden to bleed, I would give up the practice of medicine." He was of course careful to explain that bloodletting to be of any service must be practised intelligently and not abused, as he fears it may again come to be after the wave of reaction has once more made it popular.

WATERED MILK.

THE failure of the St. George's (Hanover-square) Vestry to obtain a conviction against a dairy for possessing milk largely adulterated with water is a serious miscarriage of justice. The inspector had sent a boy in to buy some milk, but, when the daughter of the dairyman saw she was watched, she took the milk back, poured it in a pan under the counter, and gave some milk from a pan placed elsewhere. The pan under the counter contained milk largely watered which, the dairyman said, was prepared for a baker who did not mind the addition of water. This was done in the morning, though the baker only came for the milk at ten in the evening. But what was more suspicious is the fact that the baker was not produced, or his name given. Why should a baker, of his own free will, consent to buy adulterated milk. It might be a little cheaper, but he would have had to use a much larger quantity to produce the required effect on the bread. Obviously, the baker had better add, according to his own idea, whatever amount of water, if any, he thought would improve his milk for bread-making purposes. Under such a flimsy pretence as the supposed willingness of a mysterious baker to buy watered milk, an adulterated article should not be kept on the premises of dairies where it can accidentally be given to other customers who are not quite so callous as to the proportion of water in milk. We fear that Mr. D'Eyncourt, in refusing to convict, has opened the door for many abuses, and that it will now be much easier for dairymen to elude the law.

HOSPITAL DEADLOCK IN GHENT.

THOUGH there is unfortunately too little tendency amongst rival practitioners to act in concert regarding appointments, students occasionally exhibit a large amount of fellow feeling for one another in this matter. A remarkable example of concerted action has just occurred in Ghent, where the students holding hospital appointments—carrying a small salary in some cases—have all resigned in a body in consequence of the "insolent attitude" of the director of the Hospitals Commission, in which he is upheld by the Commission itself. They have, however, volunteered to look after the patients gratuitously while the dispute is being arranged. It appears that they have the countenance not only of the physicians and surgeons composing the hospital staffs, many of whom are university professors, but of all the other students, who have pledged themselves not to accept any of the vacant posts for which the Hospitals Commission has advertised for candidates. It is believed, moreover, that none of the qualified men in Ghent, and none of the students of other Belgian universities, will consent to supply the vacant places, so that the Hospitals Commission has got itself into a somewhat unpleasant position. The students who have resigned only demand, it seems, that they should be free from the control of any person except their own chiefs.

FRENCH DEFENCE OF ILLIBERAL MEDICAL LEGISLATION.

"GALIGNANI'S MESSENGER" of July 21st, replying to the arguments of THE LANCET, attempts to defend the projected illiberal law of the Republic requiring foreign medical practitioners, including English, holding diplomas of good repute, to pass a French examination before being allowed to practise in France, even among their own countrymen. The attempt is lame and inadequate as regards our diplomas. It is chiefly based on three points: first, some of our English examinations are so bad as not to compare with the French. As an illustration of the accuracy of our contemporary's information we will give one specimen. He speaks of the licence of the Apothecaries' Society being gained by 97 per cent. of those who seek it. We know no ground for this assertion. The facts of the examinations of the Society for last year are before us and are as follows:—At the First Examination 12 were rejected and 17 passed; at the second 14 were rejected and 25 passed; at the Final 53 were rejected and 125 passed. The examinations have been inspected by the General Medical Council and declared to be sufficient. Our contemporary admits that we practically allow Frenchmen to practise in England without let or hindrance, but says that we do so because the privilege is of no such value as the corresponding privilege to Englishmen in France. This is ungracious and weak. Let the liberal Republic at least be as liberal as we are and enjoy the praise of being more disinterested. Meantime can anything be more ungenerous than to refuse English people, resident in France, medical advisers of their own country, certified by its medical authorities. We shall not answer the less polite insinuations and even assertions of our contemporary that, with some few exceptions, English representatives of the profession in France are eminently unsatisfactory. His elaborate argument against their admission is a fair presumption that they are no mean competitors for practice even among Frenchmen.

CRANIECTOMY FOR MICROCEPHALUS.

AT a recent meeting of the Académie des Sciences, M. Lannelongue reported a case of craniectomy in a microcephalic idiot, which was attended with results so striking that the case is well worthy of careful study. M. Lannelongue's communication, the gist of which was given by our Paris correspondent in THE LANCET of July 19th, p. 152, is printed in full in a recent number of *L'Union Médicale*. The most salient features of the case are as follows. The patient was a female child four years old, but looked two years younger. The head was very small, narrow from side to side, and projecting at the vertex; the only diameter which approached the normal was the antero-posterior, all the others were much below the average. The child was puny, seemed to take no notice of her surroundings, and lay in bed restless, stammering out monosyllables or inarticulate cries. She was unable to stand, and if supported made no effort to walk, but stamped her feet with rapidity. The child was a well-marked example of a microcephalic idiot. M. Lannelongue operated upon her in the following manner. Having made an incision through the scalp and pericranium, just to the left of the sagittal suture, a small circle of bone was removed with a trephine at a point a finger's breadth from the suture; from this as a starting point a narrow strip of bone, nine centimetres long and six millimetres broad, was

cut away, parallel with, and to the left of, the sagittal suture, the aperture in the skull extending from the coronal to the lambdoidal suture. The dura mater was left intact; the scalp wound was carefully closed by sutures, without a drain, the periosteum not being replaced across the bony defect. This operation was performed on May 9th, and the child made an excellent and uninterrupted recovery. On June 15th it was reported that the child's condition had undergone a notable change for the better since the operation. She was quieter; the inarticulate cries had ceased, she took an interest in surrounding objects, understood when spoken to, and even tried to talk. She could stand alone and even walk a little. As M. Lannelongue remarks, some of this improvement must be put down to the effect of the careful training of the child while in the hospital, but such a rapid and striking change can hardly be wholly so explained. The case is certainly a most interesting one, and further reports of it, and of a second similar case in which M. Lannelongue operated on June 20th, will be anxiously awaited. If the premature synostosis of microcephalus is the primary condition, the operation seems to rest upon a sure pathological basis. If, however, the synostosis is only secondary to defective development of the brain, still the operation, as a means of influencing the nutrition of the brain, may be amply justified.

POLLUTION OF THE RIVER LEA.

THE Poplar District Board of Works have had under consideration a report from their Sanitary Committee on the condition of the Lea, giving an account of the state of the river at various points at the time the committee inspected it. The report points out that while the river in some parts was inoffensive, in others it was greasy, covered with floating débris, and with thick, blackish, slimy filth; carcases of animals were found floating in the water, and pollution by solid material occurred between Bromley Lock and the Thames, while the foreshores were in such a condition as to be a nuisance. An account was given in the report of the proceedings which had been instituted by the Board against the West Ham Corporation, and these proceedings had been discontinued on the promise of the Corporation to properly treat their sewage, and to discharge it as far as practicable on the ebb tide only. This promise had not been fulfilled, and the committee therefore recommended that the Corporation be informed that the proceedings would be continued. It was also recommended that the Local Government Board be informed of the neglect of the Corporation, and that the attention of the Lea Conservancy Board be directed to the state of the river. The report was adopted, and it remains to be seen what the result will be. The condition of the river is a standing reproach to London, and although it is temporarily relieved of the Tottenham sewage, no justification can be found for its present state.

ELECTION TO AND RETENTION OF HOSPITAL APPOINTMENTS.

THE governors of Huddersfield Infirmary, at their annual meeting held a fortnight ago, were happily able to congratulate themselves on the successful management, increasing popularity, and financial security of the institution under their charge. The convalescent home connected with the hospital is in a similarly flourishing condition. Among the business transacted at this meeting certain changes relating to the election of members of the medical staff are especially worthy of notice. Hitherto it has been customary for candidates to appeal to an electorate consisting of the whole body of subscribers—a costly process, whether for successful or unsuccessful candidates, and almost as irksome to the electors as to those who sought their votes. The appointment of medical officers will now rest in the hands of a representative committee of forty-two members. Another important rule fixes the age of superannuation for the medical staff at sixty years. Both arrangements, by encouraging professional interest in the infirmary without prejudice either to subscribers or patients, will tend to maintain and increase the efficiency of the work done, and there is no doubt that the governors have been well advised in the steps which they have taken. At the same meeting Dr. J. S. Cameron, who has for the past fourteen years filled with much acceptance the office of physician, and who now retires, being medical officer of health for Leeds, was appointed consulting physician.

SPIROMETRY.

M. JOAL of Mont Dore has made a number of observations in spirometry that lead him to the conclusion that many nasal and pharyngeal affections produce a distinct diminution in the capacity of the lungs. Thus in cases where hypertrophic rhinitis, adenoid tumours of the naso-pharynx, chronic coryza, &c., have been cured, the capacity of the lungs, as measured by the spirometer, is frequently increased by a quarter, and occasionally even doubled. M. Joal has frequently found that public singers, when they complain of fatigue of the voice or of diminution in its power or range, are suffering from some, perhaps quite unsuspected, trouble in the nose or pharynx, and that if this is cured the voice recovers itself completely. He suggests that professional singers should know their own respiratory capacity, and that this should be occasionally tested, so that any diminution may serve to give a warning of possible mischief in the nose or pharynx, which if attended to in time may be met by appropriate treatment.

EXECUTION BY ELECTRICITY.

THE ghastly details accompanying the account of the execution by electricity of the convict Kemmler are such as to strike with horror every humane mind. The technical errors in carrying out the execution and the want of sufficient care in arranging the adjustments necessary to the effective discharge of the shock have resulted in a failure so manifest as to lead Dr. Schrady to make use of the following expression: "The execution was brutal, worse than hanging. The failure to kill at first application was barbarous. Its scientific uncertainty and the expense it involves lead me to believe that this will be the first and last electrical execution." We have more than once expressed our disapprobation of the employment of such a measure for the carrying out of the extreme penalty of the law, and shall take an early opportunity of recurring to the subject.

UNIFORMITY OF HOSPITAL ACCOUNTS.

IT has long been felt by some of the members of the Council of the Hospital Sunday Fund and by others outside that body that the Council should exert its influence to secure the observance of a more uniform state of keeping hospital accounts. The Vice-President of the Council, Sir Sydney Waterlow, was examined on this point by Lord Sandhurst's Committee. It looks as if something might now be done in this direction. At the recent meeting of the Council Sir Sydney Waterlow moved the following important resolution, which was carried with unanimity:—"That it be referred to the Distribution Committee to confer with the Lord Mayor, with the view of calling a meeting of the managers of the leading hospitals, to consider the possibility of arranging for some uniform system of accounts." The

more carefully and slowly the plan of accounts is laid down, the more likely is it that a just comparison will become possible of the expenditure and the administration of different hospitals. Mere cheapness is not a virtue. But the combination of economy with efficiency would constitute a real claim. It will not be easy to devise a uniform plan of accounts. But the sooner it is attempted the better. We shall look anxiously for the result of this consultation between the Distribution Committee and the managers of hospitals.

REFORMATORY SCHOOLS.

AMONG disciplinary institutions few are entitled to more favourable consideration than reformatory and industrial schools. They deal with a class of children from which the criminal community may be expected to be largely recruited, and they deal with them upon the whole very successfully. It is, indeed, at this point in the career of any individual whom unfortunate surroundings or defective organisation have exposed to the special risk of falling into criminal course that remedial treatment may be applied with the best hope of success. The petty offences which qualify a boy or girl for detention in such a school give to the community a right to exercise some exceptional control and to adopt in such instances a more peremptory discipline than would be a proper regimen for ordinary children. But it is very desirable that children whose aberrations are generally due much more to adverse circumstances than to vicious habit or depraved character should be kept apart from the degrading associations of the gaol, and corrected by educational rather than by vindictive measures. The report which Colonel Inglis has made to the Home Secretary upon the work of the institutions which come under his supervision during the past year seems to show that this important function is well discharged upon the whole. The general results, whether regard be had to the health, to the conduct, or to the education of the children, justify this sanguine view; but we quite agree with him that the admission of a child should be made dependent upon its physical fitness to receive an industrial training, and that care should be taken that the time daily devoted to recreation, as distinct from that occupied in the learning or practice of some handicraft, should be occupied in hearty play and not in listless loitering about a playground. Even busy employment in manual labour is not generally an effective substitute for active play. It not only lacks the zest and spontaneous character which give to play a large part of its hygienic value, but also, as a rule, it has the vice of promoting abnormal and partial development of certain faculties or muscles rather than the harmonious education of the whole.

HOUSING OF THE ENGLISH POPULATION.

THE Census (England and Wales) Bill, which will now shortly receive the Royal assent, is almost identical with the Census Act for 1881, since there are only two noticeable additions made to the scope of the census inquiry in 1891. It is enacted, as in the case of recent censuses, that schedules shall be prepared "for the purpose of being filled up by or on behalf of the several occupiers of dwelling houses with the following particulars, and no others—namely, particulars showing the name, sex, age, profession or occupation, condition as to marriage, relation to head of family, and birth-place of every living person who abode in every house on the night of the census day," showing also "whether any such person was blind, or deaf and dumb, or imbecile or lunatic." The two additions made to the scope of the appproaching census are—(1) "whether any such person speaks Welsh only, or both Welsh and English"; and (2) "where the occupier is in occupation of less than five rooms the number of rooms occupied by him." With regard to the first addition, which was made during the course of the Bill through the House of Commons in deference to the wishes of a few Welsh members, very little need be said; it is doubtful whether the Welsh householder can always be trusted to decide whether he can speak English, and the return may be complicated by the English-born residents of Wales who can speak Welsh. At any rate, the information can have but very little real interest until the information has been collected at more than one census. As regards the second addition, however, it is satisfactory to note the means thus provided for obtaining information which is of undoubted value from a sanitary point of view. The constant relation which Dr. Farr used to point out between density of population and rates of mortality no longer exists to the same extent, if density be measured by the number of persons living per acre of area. Density of population, however, probably governs mortality as surely as it used to do, but a more accurate measure of density is required; at any rate, the proportion of persons per room, if it could be given, would certainly be a better (though still imperfect) test of density as affecting public health than the proportion of persons to the acre. The requisition in the Census Act for a statement by each occupier of the number of rooms, when less than five, occupied by his family opens out possibilities in the way of density statistics which will possess undoubted value from the point of view of sanitary and mortality statistics. Such statistics will not only throw a new and very useful light upon the housing of the English population, but will render possible further investigation of the influence of density upon mortality. Statistics of the proportional numbers of families living in one, two, three, and four rooms, respectively, in various parts of the country, and in different sanitary districts, will, moreover, be full of interest from a social as well as from a sanitary point of view.

ROYAL COMMISSION ON TUBERCULOSIS.

MEETINGS of this Commission took place on July 29th and 30th, and the secretary has been instructed to prepare a memorandum of the literature of the subject to be presented to the members of the Commission when they again assemble about the middle of September. We understand that the offices will be at No. 7, Whitehall-place, and all communications on the subject should be sent to Mr. Leopold Hudson at that address.

CHOLERA INTELLIGENCE.

THE somewhat ominous silence in official quarters as to cholera in Spain has been broken by the announcement that the disease is still prevalent in Valencia, that it has undergone a recrudescence in that province, that there are also cases in the province of Alicante, and lastly, that the disease has appeared at Llerena in the province of Badajoz. Llerena is a comparatively large town to the south-east of the province, but Badajoz being one of the frontier provinces, the occurrence has led to great activity on the part of the Portuguese authorities, who have always put their main trust in quarantine restrictions, and who have already gone so far as to stop the entrance of Spanish trains into Portugal until their lazarettos and quarantine establishments are fully equipped. They have also stopped the mails, and even letters from England intended to be shipped at Lisbon for the Cape have failed to reach that port. Between May 13th and Aug. 2nd eleven hundred cases of cholera are stated to have occurred in Valencia and Alicante, 56 per cent. of the attacks having terminated fatally. France is still free from the disease, and this notwithstanding an alarm at the close of last week that a case had occurred in Paris. The attack in question was ulti-

mately decided to be one of acute gastro-enteritis. The outbreak of cholera which has broken out in connexion with the Mecca pilgrimage seems likely to be one of considerable importance. Stringent measures have been taken at the various ports and quarantine stations on the Arabian coast of the Red Sea to prevent the departure of the pilgrims except after they have undergone quarantine; but this part of the world is, above all others, the one where quarantine restrictions have exhibited their "leakiness"; and a panic having arisen amongst the pilgrims desirous of getting away to ports in the Eastern half of the Mediterranean, it has now been decided to employ a large number of troops to prevent the exodus from Arabia, and also entrance to Egypt, except by the recognised routes where lazarettos have been established. But the occurrence may come to have very serious significance for Europe, for a number of Bosnian pilgrims will be returning to Austrian ports, and others will endeavour to reach Malta and even get as far west as Marseilles. It is impossible to form any correct opinion as to the number of deaths which have as yet occurred. Whilst we hear from one source of information that the largest daily mortality has reached 155, another source gives 500 as the diurnal number of victims.

SUNDAY NOISES.

THE day of rest is not everywhere a day of quiet. Certainly the Sunday in town is not. A lull there is in the week's traffic, but this at best is relative. The bustle of wayfarers and the wheel-rattle still continue. The day, moreover, has come to have a business of its own, and much of this, we may add, has no natural or needful connexion with it. There is the immoderate bell, urging at any and all hours the attendance of already regular church-goers. Anon comes the brass band of the Salvationist or other branch of the Church militant, or again the lively clamour of some gaudy parade, procession, or excursion party. From one or other cause noise is incessant. We need hardly wonder, therefore, if a note of remonstrance occasionally issues from those who hold that rest for the senses is part of the Sabbath privilege. The stay-at-home householder, the worshipper in church, and the invalid have each in turn decried the abuse of liberty which has forced upon them the tyrannous clang and clatter of these musical performances. Little more than a week has passed since the secretary of the Westminster Hospital issued a protest on behalf of this institution. The disturbance caused on a Sunday to inmates much requiring rest, by a succession of noisy processions, might well indeed have been avoided. Whatever the end served, the blindest admirer of sensation and its effect cannot fail to see that even such attractions work mischief when the sick and those who nightly nurse them are thus defrauded of that sleep without which even the most ardent processionist would soon become a mere incapable phantom. Failing a due regard for this fact on the part of the organisers of Sunday music and parades, we would consider the moderate interference of local authorities to be entirely justifiable. We have several times pointed out that the ringing or tolling of church bells previously to morning or evening prayer has statutory authority, but no such authority exists for the practice of bell-ringing previously to the administration of the Holy Communion. To be awakened by this nuisance at an early hour in the morning is annoying in any case, but to an invalid may be a source of injury as well as of discomfort.

POLLUTION OF THE WEY.

THE Main Sewerage Board of Godalming has met to consider the course it shall adopt in view of the serious indictment contained in Dr. Seaton's report. There was read at the meeting a letter from the Guildford Rural Sanitary Authority calling attention to this report, and asking what steps the Main Sewerage Board had taken, or proposed to take, in the matter. The discussion which followed the reading of this letter is instructive, for the reason that it shows that the members of the board are by no means unanimous as to their intentions. The rateable value of Godalming, according to a statement made, is only £26,000, whereas the cost of an efficient scheme for disposal of the sewage is £30,000. Some seven years ago the board had assented to a scheme which would cost £10,000, but we understand this was not considered by the Local Government Board an adequate mode of dealing with the sewage, this board requiring a system of broad irrigation at the heavier cost, especially because the Wey enters the Thames above the intakes of the water companies. When Dr. Seaton's report was read at the meeting of the Surrey County Council, a member of the Council expressed the opinion that the reason why the Local Government Board required the more expensive scheme was not in order to meet the water companies' needs, but that the same policy was always pursued when the effluent was discharged into a river of the same character as the Wey. However that may be, the fact remains that the Main Sewerage Board must no longer delay in providing an efficient method of disposing of their sewage. The suggestion has been made that the water companies should contribute to the cost, and it was also urged at the meeting of the Board that the cost of dealing with the sewage should be made a county charge. We doubt very much the possibility of any County Council adopting such a course, and we trust the Godalming authority will not cause further delay by making any futile effort in this direction. The Main Sewerage Board has resolved to give the necessary information to the Guildford Rural Authority, and we do not doubt that it will now be required to proceed to carry out a scheme such as the Local Government Board would approve. We referred last week to the important investigation of Mr. E. L. Jacob into an outbreak of enteric fever at Farncombe, due, as was conclusively shown, to drinking water from the Wey. During the present week we learn of cholera spreading on the Continent, and we cannot shut our eyes to the fact that neglect at Godalming may mean danger in London. We hope, therefore, that the powers which the Surrey County Council can now exercise under the Rivers Pollution Act will be put in force.

FOREIGN UNIVERSITY INTELLIGENCE.

Basle.—Drs. Mellinger, Schwenett, Dubler, and Lenhossék have qualified as *Privat-docenten* in Ophthalmic Surgery, Ear and Throat Diseases, Pathological Anatomy, and Normal Anatomy with Histology respectively.

Berlin.—Drs. D. Hausemann and R. Langerhaus have qualified as *Privat-docenten* in Medicine.

Giessen.—The new Medical and Pathological Institutes and a new Obstetric and Gynæcological Clinic have just been publicly opened. The statue of Liebig has also been unveiled by Professor Hoffmann of Berlin.

Lille.—Dr. Lapersonne has been appointed to the chair of Clinical Ophthalmology.

Prague (German University).—Dr. E. Steinach has qualified as *Privat-docent* in Physiology.

Würzburg.—Dr. Th. du Mesnil de Rochemont, Assistant to Professor Leube, has qualified as *Privat-docent* in Medicine.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Professor Alexander von Bunge of Dorpat, at the age of

eighty-six, almost the senior botanist of eminence on the Continent. He was born in Kieff, but spent his school and university life at Dorpat. After taking his M.D. in 1825, he was appointed district medical officer in the Province of Tomsk, in Siberia, where he occupied himself largely in investigating the flora of that region. In 1830 he was sent to accompany a scientific expedition to Khiva, and after his return to Europe was appointed to an extraordinary Professorship in Kazan, being shortly afterwards promoted to the chair of Botany in Dorpat, where he succeeded Ledebour. During his tenure of this post he undertook a scientific expedition to Persia, and contributed largely to the knowledge of the flora of that country, as well as of the Steppes and of Russia itself. He retired from the active duties of teaching in 1867, but since that time has kept up his interest in science, having preserved his faculties unimpaired to the last.—Dr. Nikolai Berkut, formerly President of the Society of Russian Medical Practitioners in Moscow. — Dr. Ippolit Vilkomirski, formerly Prosector of Anatomy in the University of Kharkoff, and at the time of his death one of the oldest practitioners in that city.—Dr. Hallez, Professor of Clinical Medicine in the Faculty of Medicine of Lille.—Dr. Pulido Pagés, Professor of Surgical Pathology in the University of Havana.—Dr. Arturo Reyes of Havana.

THE Russian Government has ordered that all medical and pharmaceutical students shall be henceforth accustomed to the decimal system of weights and measures, with the view of making this system the only legal one for prescriptions to be written in after the lapse of five years, as it is intended to abolish altogether the use of the so-called Nürnberg weights, which are still in very general use in prescribing and dispensing.

THE nomination of Leprosy Commissioners has been made in two out of three cases. The Council of the Royal College of Surgeons, as we announced last week, have nominated Mr. Alfredo A. Kanthack, F.R.C.S. The gentleman appointed by the Leprosy Committee is Dr. G. A. Buckmaster, Lecturer on Physiology at St. George's Hospital Medical School.

THE fourteenth annual meeting of the American Dermatological Association will be held at Richfield Springs, New York, on Sept. 2nd, 3rd, and 4th, 1890. President, Prince A. Morrow, M.D., New York; Vice-President, George H. Tilden, M.D., Boston; Secretary and Treasurer, George Thomas Jackson, M.D., New York.

IN the University of Rome there has just been opened a Laboratorio di Psichologia Sperimentale, in connexion with the Anthropological Institute. Its superintendent is Professor Sergi, whose work in medico-psychology is well known in Italy and on the Continent.

THE German Government have added considerably to the annual subvention by which they keep up the Station of Marine Zoology at Naples, so as to make it more than ever the resort of students in natural history from all parts of the world.

THE Council of the Royal Medical Benevolent College will shortly elect an orphan daughter of a medical man to a Scholarship at the School of St. Anne's Society. Particulars will be found in our advertising columns.

ONE thousand pounds have been given by an anonymous donor to found a hygienic institute in Warsaw in memory of the late Professor Chalubinski.

THE INTERNATIONAL MEDICAL CONGRESS IN BERLIN.

OPENING OF THE MEDICAL EXHIBITION.

THE Medical Exhibition was opened on Saturday forenoon in the central hall of the Exhibition Palace in the park between Berlin and the north-western suburb, Moabit. The Home Minister, the Minister of Commerce, the Rector of the University, the Belgian envoy, Dr. Weber of Besançon, Surgeon-General Professor Kelsch of Paris, the anatomist Teichmann of Krakow, the members of the Organisation Committee of the Congress, and many other eminent medical men and official dignitaries were present. The hinder part of the hall was filled by members of the Congress and others specially interested in the Exhibition. The band of the Czar Alexander's Prussian Grenadiers opened the ceremony with Beethoven's hymn, "The heavens are telling the glory of God."

At about 11.30 Dr. OSCAR LASSAR, the indefatigable secretary of the Exhibition Committee, addressed the assembly. After a short allusion to the value of special exhibitions, especially of those of a scientific nature, he described the difficulties with which the present Exhibition has had to contend. The shortness of its duration, the remoteness of that metropolis, &c., had deterred many well-qualified firms and institutions from taking part, while others had announced their intention to do so only at the last moment. On the other hand, those who had taken part had done so on a very considerable scale. The success of the enterprise had been due in a very great measure to the participation of the Prussian Ministry of War, the Imperial navy, the Bavarian Government, and the Imperial Office of Health. Synthetic chemistry, pathology, microscopy, and the whole apparatus auxiliary to the tending of the sick were eminently well represented. The task of the committee was now ended, and he handed the catalogue as a symbol of the transference of the whole Exhibition to Privy Councillor Professor Virchow, who accepted it in the name of the Organisation Committee.

Professor VIRCHOW, in addressing the assembly, referred, like the previous speaker, to the obstacles with which the enterprise had had to contend, and which had more than once driven the committee to the resolution "to throw the rifle into the corn" (i.e., to abandon the enterprise). He commended the resolution and perseverance of the Minister of Religion, Education, and Medical Affairs, who had always shown a firm determination to make the Exhibition an accomplished fact at all costs, and had thereby once and again revived the courage of the committee. The main difficulty, the question of locality, was finally solved in the most satisfactory manner, thanks to the obliging conduct of the Senate of the Academy of Arts and of the Society of Berlin Artists, so that the Congress was now permitted to regard the Exhibition Palace as its home, and even to hold its departmental sittings in it. For eighteen sections about 400 papers had been announced; certainly a formidable work, but one that would nevertheless probably be got through. He thanked the Exhibition Committee and the exhibitors in the name of the Congress for the accomplishment of its task, and expressed the hope that the exhibitors would be rewarded for their great sacrifices by corresponding business advantages. He referred at some length to the Governments whose participation had been the preliminary condition of success. Almost all the Governments in the world had interested themselves in the enterprise, but especially Germany had shown herself worthy of the occasion in the most praiseworthy manner; the Imperial Government, the Governments of Prussia and of the other Federal States, and, last not least, the city of Berlin had vied with each other in contributing to its success. Special gratitude was due to the Imperial Government for the, in some measure, official recognition of an international scientific congress. The Emperor himself, though unfortunately prevented from being present in person, regarded the Congress with sympathy, and the Empress took a very great and practical interest in all hospital matters. He, therefore, begged the assembly to

join him in the cry, "Long life to His Majesty the Emperor William!" When the loud cheers and the tones of the National Anthem had died away, Professor Virchow declared the Exhibition opened.

Privy Councillor KOEHLER, Director of the Imperial Office of Health, then welcomed the assembly in the name of the Imperial and of the Prussian Government. He expatiated on the nature and importance of medical exhibitions. The question might arise whether such an Exhibition in connexion with the Congress was right and expedient, but medico-scientific knowledge was based to so great an extent on looking at things with one's own eyes, that exhibitions had long been regarded as indispensable concomitants of medical congresses. The tasks of observation had to be performed with all the aids of modern technics, whether derived from the domain of optics, of electricity or other natural forces, or from one of the three great kingdoms of nature, whether they be buildings or works of engineering art and the like, or whether, finally, they have scientific representation in statistical or cartographic form for their object. In recognition of this relation, the competent authorities of the German Empire and of Prussia had endeavoured to show the visitors of this exhibition things eminently worth seeing. The fulness of the material proved that the suggestions of the committee had fallen on fruitful soil in other quarters also. Might the enterprise help to realise the high aims of the Congress, and might the exhibitors, the Organisation Committee, and especially the sub-committee appointed for the Exhibition, find in the consciousness of their ideal purpose the reward for the great pains and expense to which they had with willing alacrity put themselves.

The audience then rose, and were conducted by the gentlemen of the committee, amid the strains of the march in Tannhäuser, through the spacious halls of the Exhibition.

THE OPENING OF THE CONGRESS.

The opening of the Medical Congress, which took place in Renz's Circus on Monday forenoon, was a magnificent affair. In the Karlstrasse, before the broad and deep gap which leads to the circus, stood a triumphal arch, from which garlands, fastened to lofty flag-staffs, hung to the entrance. From the window of Dr. Lassar's adjacent private hospital, richly wreathed with flowers, shone in large golden letters the welcome: "Orbis Terrarum Universi Medici, Salutamini." The circus itself is magnificently decorated. From the vaulted ceiling hang the flags of all nations. The background of the vast hall, opposite the entrance, is formed by a wall, on which the baths of Caracalla are painted. Before it stands a colossal bust of Æsculapius, looking down on the platform before it. In the royal box on the left, which is decorated with magnificent plants, stands a bust of the Emperor, while the opposite box is transformed into a little temple, with a statue of Minerva in the foreground. Both boxes are adorned at the sides by statues of Victory. A multitude of many thousands filled the spacious amphitheatre, including several hundred ladies. The places on the arena were reserved for the official dignitaries and the most eminent members of the Congress. Of the latter may be named Billroth, Nothnagel, Albert, Meynert, Störk, Winternitz, and Kraft-Ebing, from Austria; Paget, Lister, Macewen, Horsley, Semon, Pavy, Clark, MacCormac, Brunton, and Ord, from England; Bouchard, Dujardin-Beaumetz, Le Fort, Richet, Proust, Apostoli, Ollier, Chauveau, Cornil, Roux, and Nicaise, from France; Mosso, Celli, Baccelli, Cantani, Maragliano, Golgi, and Foa, from Italy; Thiry and van Beneden, from Belgium; Stokvis, Pel, Snellen, Guye, Förster, Rosenstein, and Pekelharing, from Holland; Lange, Iversen, and Gent, from Denmark; Laache, Heiberg, and Klauss Hanssen, from Norway; Holmgren, Axel Key, and Retzius, from Sweden; Kocher, Socin, Prevost, Fehling, Fick, Huguenin, and Dufour, from Switzerland; Erisman, Heryng, Kraepelin, Schmidt, Barfurt, Unverricht, Dehio, and Danilewski, from Russia; Wood, Knapp, Billings, Bernays, Senn, Keen, Sayre, O'Dwyer, Jacobi, Osler, Stewart, and Loomis, from America. Spain, Portugal, Roumania, Greece, Turkey, Egypt, Japan, Mexico, Texas, Brazil, and Chili are also represented.

The hall was filled long before eleven. The diplomatic corps was numerously represented, the German Government by Minister von Boetticher, and State Secretaries Maltzahn and Oehlschlaeger, the Prussian by Gossler, Herrfurth, and Miguel, and the army by Generals Pape and Rauch. The city of Berlin was represented by Burgomaster Forckenbeck, and many councillors and deputies; several German universities by their rectors and deans in their official robes. Duke Karl Theodor of Bavaria, who is an eminent ophthalmic surgeon, and Professor Virchow were greeted by loud clapping of hands, which was repeated when Professor Virchow mounted the platform to declare the Congress opened.

PROFESSOR VIRCHOW'S ADDRESS.

Professor VIRCHOW commenced his address by describing the preparations for the Congress, and begged indulgence for whatever defects there might be. He had first to welcome the foreign guests whom he rejoiced to see before him in such numbers, and of such eminence. "One," he continued, "who had occupied a public chair in German universities for more than forty years, who recalls to memory numerous losses of the best friends, with whom he has worked, whom he has himself helped to educate, may well deem himself fortunate, if he sees again in this brilliant assembly men who were his teachers, if he beholds living before him representatives of almost all the schools of medical thought which have arisen since then, the originators of almost all the path-opening discoveries which have transmuted the outer form and the inner nature of our science from top to bottom, the greatest investigators and the first practitioners—if he finds again among the professional brethren who have gathered here from far and near old pupils who have imbibed the spirit of the new time, and developed it to most powerful effect. Yes, I may well say it is a happy day on which it is permitted me, honoured by the good opinion of the last Congress, and supported by the confidence of my countrymen, to open this Congress in the city to which my public endeavours have been devoted for so many years. And therefore I bid you all, from the bottom of my heart, joyfully welcome in my own name, and at the same time in that of the whole Organisation Committee, whose members have endeavoured in faithful and harmonious labour to perform the task allotted to them, and are grateful to you for the truly comrade-like spirit in which you have accepted the invitation issued to you. Be assured that you will be received as dear guests everywhere in our country. Our people know that medicine is one of the sincerest representatives of humanity; they are accustomed to see investigation and practice coöperating among medical men in the closest union, the highest ideals of effort combined in their minds with self-sacrificing care for the public good, and for the good of individuals, even of the least and poorest. Medicine is a really popular science in Germany. Our people are proud to see their physicians and their sanitary arrangements esteemed abroad, but they also, for their part, esteem the names of great medical men in other lands, and know well that there is only one medical science, and that really scientific physicians all over the world are devoted to the same endeavour and share the same principles. Our professional brethren will be able to appreciate the fact that this Congress is the first great international one which has even in the preliminary stages enjoyed the complaisance and ready sympathy not only of the Imperial Government, but also of the Federal Governments in so large a measure. These Congresses have not been the least among the factors which have contributed to render the difficult problems which our science is striving to solve more intelligible to the people. With ever increasing interest public opinion pursues the surprising solutions which are being in rapid succession extorted from nature, and both the statesman and the private citizen recognise with grateful hearts that the great sacrifices which modern research demands are rewarded by great—nay, by unexpected blessings. We hope to be able to prove to our professional brethren by ocular demonstration how deeply this conviction is penetrating all strata of our population. One institution after another has been established to facilitate medical instruction, to found new places of research, to drain away the sources of diseases, and to afford swift and certain help to sufferers. In this imperfect world all practical progress is made only step by step. The great evils that afflict mankind—poverty and war—are continually threatening society and States. But it is a consolation for us that the people and the Governments of Germany are perseveringly busy mitigating social evils and

preserving peace—golden peace. Medicine has little or no opportunity of determining the great decisions of social and foreign policy. Its first task is helpfully to coöperate under existing conditions so far as injuries of human beings are caused by the circumstances under which they must live and act. Nowhere is this more strikingly illustrated than in the army. Our military administration intends to prove to you that no progress worth mentioning in the cure and prevention of diseases has escaped it. It is perhaps advisable, in order to prevent possible misunderstandings, to remind you that the organisation of the German army has in many respects obliterated the boundaries between civil and military physicians and surgeons. Even in peace almost every doctor among us has repeatedly to go through longer or shorter exercises in order to make himself perfectly acquainted with practical service; in the case of a great war, however, the majority of all younger medical men are at once called out and sent to the field. The most experienced hospital doctors, especially among surgeons, find their places appointed them in the conduct of the war hospitals. Thus, the medical service in the army acquires that certainty which is the best guarantee of success; thus, also, it retains that humane character which the daily service of the practitioner in his civil calling has matured and developed. If military medicine is demonstrated to you here with a completeness impracticable in the case of civil medicine, I assure you that this is not done in order to show you how well we are prepared for war in this as well as in other respects. On the contrary, it is done in order that you may recognise that the leaders of our army continually and successfully hold fast the purpose of mitigating the horrors of war, and of giving the dictates of philanthropy full scope the moment the adversary has ceased or is unable to fight. For this reason also there are no secrets in the province of military medicine. The more others can learn from us the more will be offered them, for what they learn may one day perhaps turn to the benefit of our own countrymen; at least it will serve mankind. And is it not, my honoured professional brethren, the highest task of the International Medical Congresses to make all who take part in them—nay, all medical men all over the world—fully conscious that medicine ought to be a humane science? Shall we not, with just pride in the magnitude of the personal sacrifices which the individual physician, often for the poorest reward or even altogether without reward, makes, point to the fact that physicians do not flock together from all parts of the world to such vast assemblies to gain personal advantages, to improve their position, to secure higher recompense and shorter time of work, but to enrich themselves in knowledge, to increase their efficiency, in order to serve their fellow-creatures still better than before? For this reason the third article of our statutes runs: 'The purpose of the Congress is an exclusively scientific one.' For this reason we refrain from inquiring how the social position of the medical man may be improved, deeply though we feel that social distress is spread in wide circles of the medical profession also. Here we rally round the banner of science; here we stand in the foremost ranks of the champions of humanity. And this conflict is as full of hope as can be imagined. Wherever the Congress has met, in all the capitals of the Old and of the New World, it has found the citizens at work, raising the sanitary arrangements, even with the greatest sacrifices, to that level which science prescribes. These great cities, which people so often describe as the breeding-places of poverty, of social savagery, of the struggle of all against all, are nevertheless, seen by daylight, the seminaries of genuine humanity, of self-sacrificing philanthropy, of mutual help. The death-rate is sinking, dwellings and food are improving, earnings are increasing with the increase of knowledge and skill, and if, nevertheless, many unfortunate persons sink into distress and disease, the number of the institutions which bring help to individuals is increasing in perhaps equal proportion. And this, my honoured friends and professional brethren, you will be able to see in few places so clearly as in our city. The municipal authorities, in full appreciation of the importance of this Congress, have had a special literary work elaborated for us, which represents in a condensed manner the rich fulness of the institutions for the care of public health and of the sick in the city of Berlin. But perhaps you will permit me to single out at least one institution for which the city of Berlin is classic soil. I mean our sewerage system, in connexion with the municipal water-supply on the one hand and with the irrigation fields on the other. What a change this has made in the whole aspect of our city only those can judge who saw its streets and squares, its houses and dwellings, twenty years ago. The means, expended, however, may give a general idea of the magnitude of the work. The sewerage system of the city cost 42,500,000 marks (i.e., shillings), the purchase of the irrigation estates 12,500,000; the expenditure for the construction of the drains and the preparation of the fields amounted up to the end of March, 1889, to 79,000,000 marks in all. The book value of the municipal waterworks amounted at the same time to far more than 39,000,000 marks, and new works are already projected, the first half of which is estimated at 20,000,000. That makes for these sanitary works alone an expenditure of 138,000,000 marks. It cost hard struggles before the representatives of the city undertook these great enterprises; investigations of all the questions involved, lasting for years, went before; but at last the citizens of their own free conviction took their resolution, and adhered to it, even when the official authorities took a contrary view, and prophets of evil grew like mushrooms out of the earth. Thus Berlin has become a clean, a healthy, perhaps one may even say in a certain sense a beautiful city. Now this method of cleansing a city was no invention of ours. Many other cities had preceded us. Great waterworks were built even in remote antiquity. And yet we are at liberty to say that our works give the first example in the world of the complete cleansing of a great city by water-supply, sewerage, and irrigation in such harmonious combination, and of the financial practicability of such a combination without oppressively burdening the citizens. People may go on disputing whether chemical or mechanical cleansing, whether a separation of the various kinds of drains, or whether pneumatic drains or flush drains are preferable. We do not claim that our works should be recognised as the best or as the only good ones. Altered circumstances always demand another solution. But what we wish to show you, and what we especially invite you to inspect, is the completeness and harmony of the arrangements which we have made. Nowhere in the world have such large tracts of land ever been used only for the purpose of cleansing the sewage waters of a city. Our irrigation fields comprise an area of 7614 hectares. They form two large, pretty well connected territories, one in the north, the other in the south of the city. In the year 1888–89 they yielded a surplus of 238,000 marks over the working expenses. The analytical results of the investigation of the effluent you will find in the work prepared for you by the city; the water is freed of all noxious ingredients. Now, gentlemen, you are invited to inspect and examine the sewers and the waterworks for yourselves. We attach some value to seeing critics so competent judging of our procedure. You will convince yourselves there that it is possible to meet Liebig's old demand that the soil, the vegetable world, or, let us say, agriculture, shall receive back what has been received from it, and even a little more. Not, indeed, the agriculturists, for though we do give sewage to some owners, it has been found necessary, for the sake of complete and constant purification, to keep the agricultural management in our own hands. Thus our city has become in a surprising degree, considering the modern division of labour, not only a great landowner but also an agricultural manager. In this way also certain possibilities have resulted which belong to the social political province, and which may probably be still further extended in course of time. The workmen on the irrigation fields are largely drawn from the city workhouse; in time they are converted from vagabonds into able workmen, earning money. The old mansions on some of these estates have been transformed into convalescent homes. Thus, without preconceived plan, the whole is developing itself more and more, on the basis of progressive experience, into a system of economic exchange of high social importance between city and country. Forgive me, honoured Sirs, this somewhat long digression on a single group of municipal institutions. In importance, however, it far transcends all the other individual establishments and arrangements which you may study. It is, at the same time, the one which can teach more than the others how much the firm will and the cautious action of an independent community, testing step by step, and then, after thorough testing, going resolutely forward, are able to do in fulfilling the largest demands of science. And you will learn from them that almost all the great establishments which will

be shown you were erected at a time when, in the opinion of some, Germany was occupied with nothing but preparation for new wars. No, gentlemen, we are honest adherents of peace. We know that peace nourishes and dissension destroys. We wish to live in concord with all the world, in order to pursue the tasks of science and the aims of humanity undisturbed, and in our own way. We are happy to see ourselves surrounded by so great a number of valued professional brethren in whom we are permitted to presuppose similar sentiments, and whose coöperation will be a new stimulus to our diligence. Once more, therefore, I bid you heartily welcome to our city! May each day contribute more and more to promote full understanding and true friendship amongst us all!" (Loud and prolonged applause.)

The Secretary of the Congress then delivered his report on the internal affairs of the assembly. No fewer than twenty-three States, he said, are represented in the Congress. Amid enthusiastic and prolonged applause, he stated that the French Republic had ordered thirty-four delegates to attend the Congress, including many recognised as authorities far beyond the limits of their fatherland. Besides the official representatives, about 2500 medical men from Germany were announced, and the number of the foreign guests was about the same. From North America 500 were present; from Russia and England 300. About 1000 ladies had come. The Secretary further stated that Edison's representative would demonstrate his new method of destroying stone concretions by electricity.

In the name of the German Empire and by order of the Emperor, Secretary of State von Boetticher welcomed the assembly, which his Majesty regretted not to be able to attend. He referred to the influence of modern hygienic science on the administration and on modern hygienic legislation. He alluded to the merits of the first German Emperor, and to the unexampled working power of his great Chancellor. The imperial authorities would not dispense with the help and counsels of science in the solution of their socio-political problems. The self-sacrificing labours of physicians and surgeons eminently deserved grateful recognition. In this province of things no barrier of political party, no dividing national frontier, separated men. The German Empire and its Emperor had not delayed to evince their warm interest in the negotiations of the Congress.

In the name of the Prussian Government, Minister von Gossler welcomed the Congress. He laid stress on the fact that medical truth could not be other than one and harmonious. And here the combination of medicine with natural science on the one hand and with the administration on the other proved specially beneficial. In this spirit he, as minister of spiritual, educational, and medical affairs, viewed his difficult office. He especially emphasised the influence of legal social reform on the development of medicine. The protection of the lives and health of the working people was at present the main endeavour of theoretical and practical medicine. He hoped that the negotiations of the Congress would be attended by success. The warm interest of the Prussian Government would not be wanting.

In the name of the city of Berlin, Burgomaster von Forckenbeck welcomed the assembly. He gave a condensed account of the development of the public hygienic institutions of the city.

Dr. Graf then welcomed the assembly in the name of the German Societies of Physicians and Surgeons, whose great aim was the improving the position of the profession. The German doctors could certify themselves that they were working according to their strength at the fulfilment of their social and scientific tasks, and these tasks were in a certain sense international, for they redounded indirectly to the benefit of medical men in all countries.

After the Secretary of the last Washington Congress had spoken, Sir James Paget ascended the platform amid loud applause. He expressed the thanks and assured the assembly of the sympathy of his countrymen. He was followed by the French delegate, Dr. Bouchard, who in a few hearty words conveyed the good wishes of his countrymen. The Italian delegate, Dr. Baccelli, expressed his gratitude to the Congress, the Empire, and the President in eloquent classical Latin. The Hungarian delegate, Csatáry, greeted the Congress in fluent German, and the representatives of Russia and Greece did likewise, after which a representative of the South American States addressed the assembly in Spanish. On Dr. Baccelli's motion, Professor Virchow was then elected President by acclamation. The following honorary presidents, among others, of all nations, were then elected—Duke Karl Theodor of Bavaria, Paget, Grainger Stewart, Stokes, Billings, Bouchard, Csatáry, Billroth, Baccelli, Holmgren, and Stokvis. The President then announced a pause in the proceedings, which had lasted two hours.

Berlin, Aug. 5th.

GYNÆCOLOGY AND OBSTETRICS.

This Section assembled at 4 P.M. on Monday, when the President, Dr. MARTIN (Berlin), in a brief address, welcomed the members to Berlin, and explained the manner in which the Section would be worked. Dr. Dohrn (Königsberg) then took the chair. Dr. Galabin (London), who was to have opened the discussion on "Antisepsis in Midwifery," not being present, an abstract of his paper was handed round, in which he insisted on the immense importance of antisepsis, and that it should be thorough—attendants' hands, instruments, &c., being rendered aseptic, and vaginal douches of sublimate injections (1 in 4000) being used. Dr. Slawjanski (St. Petersburg) presented a table showing the reduction of the mortality at his hospital since antiseptics were introduced, and spoke in favour of sublimate solution. He was followed by Stadfeldt (Copenhagen), Fritson (Breslau), Pippinskeold (Norway), Doederlein (Erlangen), who exhibited photographs of bacterial culture from cases of puerperal septicæmia, and Dr. Priestley (London), who referred to the benefit he found on a former visit to the northern hospitals of Europe from the introduction of antiseptics; he thought that obstetricians as well as surgeons owed much to Sir Joseph Lister, and recognised the great benefit to students that would follow if, by antiseptics or other means, large hospitals could be made as safe as small ones. He believed that much of Dr. Slawjanski's success was due to his great care and cleanliness and to the healthy surroundings in which he worked, and warned his hearers of the risk of sublimate poisoning.

On Tuesday morning, at 7 A.M., Dr. Martin performed a series of resections on the uterus and vagina of a patient in his own house. He first scraped out the uterus, then removed portions of the anterior lip, then of the posterior lip, and also removed a portion of the vagina. At 8 A.M. the Section met and several demonstrations were given, amongst which Dr. Barbour of Edinburgh exhibited some very interesting frozen sections and casts from pregnancy and labour. One from the second stage is unique, as it showed the relations when the child's head is on the perineum, the chief features being the presence of a well-marked retraction ring, with thinning of the walls of the genital tract below it, and the elongation of the fœtus with slight extension instead of flexion of the head. The membranes were separated up to the retraction ring, but the placenta not at all. A coloured cast was also shown, which will be of great use for teaching. Dr. Leopold (Dresden) showed an undoubted specimen of ovarian gestation, as also a case of tubal gestation at full time without rupture. Dr. Sabatier (Lyons) exhibited several uterine tumours removed during pregnancy, and one after labour had commenced. On assembling at 11 A.M., Dr. Péan (Paris) in the chair, Dr. John Williams (London) opened the discussion by a very able paper on the Indication for Total Extirpation of the Uterus by the Vagina, in which he treated very fully of the various forms of uterine cancer—viz., of the (*a*) body, (*b*) cervix, and (*c*) vaginal portion. In the first the indications depend on (1) volume of uterus, (2) its mobility and adhesions, (3) the implication of adjacent or distant parts. In *b* and *c* the propriety of the operation depends on the history of cancer when left alone, its duration, seat of origin and direction of growth, and on the after-history of cases of supra-vaginal amputation. He then opened up the whole question in all its bearings. He was followed by Dr. Schauta (Prague), who spoke strongly in favour of the operation by Pozzi (Paris), who reserved it for exceptional cases owing to its risk and the difficulty of being sure the adjacent tissues were not invaded, but would not employ forced retroflexion. Dr. Olshausen (Berlin) agreed that forced retroflexion was unnecessary, and condemned forci-pressure. Dr. Péan's rising was the signal for a great ovation. He spoke in his usual eloquent and decided manner for ten minutes in favour of the operation, and strongly urged the advantage of forci-pressure, of which he had had a very large experience. On conclusion, he was again most warmly applauded, and Dr. Martin, in a few graceful words, thanked him for coming, and warmly

shook his hand. On assembling at 3 P.M., Professor Simpson (Edinburgh) was in the chair. Dr. Schatz (Rostock) read a paper on the Cause of Turning of the Head of the Fœtus in the Axes of the Pelvic Canal. Dr. Zweifel (Leipsic), in a paper on the Mechanism of Delivery, alluded to the importance of Barbour's casts in saving the elongations of the fœtus as a whole, and the rotation of the head on the shoulders. Dr. Pestalozza (Pavia) exhibited recording instruments for counting the pulsations of the fœtus in the uterus of the mother. Skutsch (Jena) discoursed on the Measurement of the Pelvis. Dr. Chalmers-Cameron (Montreal) contributed some further observations on the influence of Leukæmia upon Pregnancy and Labour; Dr. Küstner (Dorpat) spoke on the Development of the Amniotic Ligaments; Dr. Stuart Nairne (Glasgow), on investigations into some of the causes of Incontinence of Urine in Females, and their cure by Surgical Operation; and Dr. Neugebauer (Vatovie), on the Treatment of Chronic Uterine Inversions by Hydrostatic Pressure.

(FROM OUR SPECIAL CORRESPONDENT.)

Berlin, Aug. 4th.

At the general meeting, held at the Circus Renz, after the several speeches of welcome and Dr. Virchow's address and Dr. Lassar's (the general secretary) statement, Sir J. Lister gave a masterly address on Antiseptic Treatment in Surgery, and Dr. Koch one on Bacteriology. It is impossible to give an outline of Sir J. Lister's paper. Dr. Koch's address treated chiefly of what is already known. The new points were some observations on tuberculosis as observed in the fowl, and on the possible curative treatment of phthisis by drugs. In a series of experiments which he lately conducted, he found that certain bodies, such as volatile oils, and certain metallic salts, such as nitrate of silver and preparations of gold, even in very small doses (1 in 1,000,000, and even less), destroy the tubercle bacilli in a very short time, and he thus believes that it is not impossible that in the course of time some drug may be found which will effectively destroy the bacillus without injuring the body.

In only two Sections (Neurology and Pathological Anatomy) were any papers read to-day; in all others nothing further was done than to choose office-bearers and regulate the mode of conducting the work of the Section.

In the Section of Neurology several papers were read, one by Dr. Minor of Moscow on Syringo-myelia being especially interesting. From a series of five cases Dr. Minor believes that often central hæmato-myelia may give rise to symptoms of syringo-myelia, and that it is difficult sometimes to distinguish the one from the other.

In the Section of Pathological Anatomy a discussion took place on the part which leucocytes play in inflammation. All the speakers (Professors Ziegler, Marcham, and Grawitz), from their own personal observations, came to the conclusion that the exuded leucocytes had nothing to do with the new formation of tissue, and that this developed from the tissue corpuscles, which swell, form the epithelioid cells, and proliferate, and eventually form fibrous tissue. Grawitz, by using Spronk's method (Nederl. Tijdschrift voor Genees-Kunde, No. 20, 1889) of examining fresh blood in a mixture of chrom-acetic acid, was able to study well the changes which the leucocytes undergo, and thus to distinguish those changes in inflammation due to the exuded leucocytes, and those due to the proliferation of tissue corpuscles—as the pictures obtained by the change of cells are at one particular stage very similar.

In the Section of Medicine Professor Leyden, in a few well-chosen words, welcomed the members, and spoke of the aim of medicine. He especially dwelt on the importance of the constitutional, hygienic, and dietetic treatment, which was now receiving more attention than ever.

Berlin, Aug. 5th.

All the Sections are in full work to-day.

The papers in the Section of Pathological Anatomy are chiefly on bacteriological subjects.

In the Section of Medicine Lepine and Grainger Stewart opened the discussion on "The Treatment of Bright's Disease," and Professors Rosenstein (Leyden), Senator (Berlin), and Aufrecht (Magdeburg) joined in the discussion. The subject having so recently been discussed at the German Congress of Medicine at Vienna, the speakers confined themselves to a few points. Professor Grainger Stewart dwelt especially on the avoidance of chills and exposure to cold, and on the dietetic treatment. The diets he was in the habit of ordering may be grouped under four heads:—

Diet.	Albumen.	Carbohydrates.	Fats.
1. Ordinary...	4·665 oz.	... 10·65 oz.	... 3·32
2. Large	6·86 ,,	... 13·07 ,,	... 4·6
3. Milk.....	3·2 ,,	... 3·84 ,,	... 2·96
4. Low.....	2·494 ,,	... 16·06 ,,	... 2·202

And of these the best result he obtained by combination of diets 3 and 4. Diets 1 and 2 increase the albumen and urea, and are hence unsuitable. Pure milk diet may do harm by giving rise to gastric disturbance, producing constipation, hence he gives it at short intervals and diluted with water. Iron can be given to relieve the anæmia. Diaphoretics are to be recommended, and for the relief of the anasarca and dropsies tapping with antiseptic precautions. Rosenstein does not believe that medicinal treatment does any good in Bright's disease, as there is no drug which has any effect on the albuminuria, but many drugs may do harm; especially is this the case with calomel. He advises rest in bed and judicious diet. Senator believes that in cases of interstitial nephritis iodide of potassium will do good.

The next subject for discussion was the treatment of Phthisis. The discussion was opened by Dr. H. Weber (London), who was followed by Professor Leyden, Dr. Dettweiler, and Dr. Neffzel (New York). Dr. Weber, whilst not underrating the value of climate, gave strong expression to the desirability of treating phthisical patients in institutions especially adapted by situation &c. He strongly advocated the establishment of such hospitals as that at Ventnor, to be made accessible to the poorer classes. All the other speakers who followed also spoke to the same effect.

The Section of Surgery, Neurology, and Physiology combined to hear the opening of the discussion on Cerebral Surgery by Professor V. Horsley. Professor Horsley's able address was fully illustrated by lantern slides, and for the guidance of the members he had drawn up tables, so that, as the subject is a very large one, special points could be discussed. Professor Horsley enumerated the various affections of the brain (fractures, hæmorrhages, inflammatory focal lesions, septic meningitis, epilepsy, cephalalgia, tumours, &c.) where surgical interference is indicated, and briefly dwelt on those lesions of the vertebral column and cord which required operation. The address formed one of the chief features of the Congress, and the members testified their appreciation by rising from their seats.

In the Section of Medicine Dr. Adam Kiwitz gave a paper on Intracranial Pressure, and Drs. Ebstein and Nicolaier gave a demonstration on Renal and Cystic Calculi produced by feeding animals on oxamid.

In the Section of Pathological Anatomy Dr. Max Wolff showed that he had succeeded in cultivating actinomyces, and also, by inoculating rabbits with pure cultivations, in producing typical actinomycosis.

PUBLIC HOSPITAL AND DISPENSARY, SHEFFIELD.—The financial position of this institution is satisfactory. The deficiency which existed on the income account of £367 12*s.* 7*d.* has been liquidated by the appropriation of legacies paid during the past year. The medical staff has again presented to the governors an important report on the absolute need of a new hospital building. Since 1888 special donations have been received for this purpose, and the building fund now amounts to upwards of £1300. An impetus has been given to the proposed new building by Mr. Bernard Wake, who has generously offered to erect at his own cost a new out-patient department. He has also provided a convalescent home at Sandygate, and contributed £25 towards sending patients from the hospital to the home.

MUNIFICENT CHARITABLE BEQUEST.—The late Mr. Handel Cossham, M.P., of Weston-park, Bath, bequeathed, subject to certain specific provisions, all his real and personal estate (the personalty being of the value of £59,127) in trust, the income to accumulate during the lifetime of Mrs. Cossham, and on her death, or within three years thereafter, to be applied, so far as the law allows, to build on or near Kingswood-hill a hospital for the sick and injured of both sexes.

THE

BRITISH MEDICAL ASSOCIATION.

MEETING AT BIRMINGHAM.

AT the last general meeting of the Association, Dr. BROADBENT delivered the address in Therapeutics, which we publish in another place. The address took one hour and a quarter to read, and was listened to with much attention by a considerable audience.

Dr. WM. CARTER (Liverpool) proposed a vote of thanks for the address. The motion was seconded by Dr. Robert Saundby, and was carried unanimously.

REPRESENTATION ON THE COUNCIL.

Dr. RENTOUL submitted a motion having for its object the increasing of the number of direct representatives on the General Medical Council, in which he was supported by Mr. Atkinson and Dr. Kingsbury (Blackpool).—Mr. Wheelhouse, as a direct representative, expressed himself as adverse to increasing the number of representatives on the General Medical Council, which, he thought, was already too large. After considerable discussion, Dr. Rentoul agreed, on the motion of Dr. Saundby, to submit the question to the Council of the Association for further consideration.

Some other matters were brought forward by Dr. Rentoul, among which were the subjects of the registration of midwives and the reform of medical charities.

REGISTRATION OF NURSES.

Dr. BEDFORD FENWICK moved: "That in the opinion of this meeting it is essential, for the safety of the public, for the satisfaction of the medical profession, and as a matter of simple justice to trained nurses, that a system of registration of trained nurses should be legalised as speedily as possible, either by Act of Parliament or by Royal Charter. In the opinion of this meeting it is furthermore imperative that this registration should be carried out by a purely professional body—that is to say, by one composed of medical men and hospital matrons. This meeting, therefore, requests the Council of the Association to consider the question and report thereon at the earliest possible date."

Dr. Brooke (Clifton) seconded the motion, in which he was supported by Mr. Macartney (Cinderford).

Dr. GEORGE POTTER moved as an amendment, which Dr. Fenwick accepted, that in view of the lateness of the hour, the smallness of the meeting, and the importance of the subject, the consideration of it be referred to the next meeting. This was agreed to.

On the motion of the President, votes of thanks were accorded to the Mayor of Birmingham, the Archbishop of Canterbury, the President and Council of Mason's College, the Council of Queen's College and Midland Institute, to the distinguished representatives of foreign medicine and surgery who had honoured them with their presence, and to those who had assisted in arranging the various entertainments. It was the opinion of the President that the meeting at Birmingham would be classed as one of the most successful meetings the Association had ever had. Mr. George Potter moved a vote of thanks to the President, after which the business of the Association terminated.

During the week excursions had been arranged to various places of interest in the neighbourhood. On Wednesday about 150 members of the Association visited Lichfield. The company wandered slowly through the quiet streets to the cathedral, where they were met by Canon Curtis, who described very lucidly the principal characteristics of the building and its history. The day selected for the visit to Droitwich (Friday) was lovely, and the arrangements made for the entertainment of the company by Mr. John Corbett, M.P., were excellent. The brine baths are well fitted up, and the arrangements for patients are very complete. The company was entertained to luncheon by their liberal host, Mr. Corbett, in the Salters' Hall. Dr. Roden had the conduct of the company. On Saturday 170 of the visitors went to Worcester and Tewkesbury, and being favoured with a splendid day they had a most enjoyable visit. Luncheon was provided in the Town Hall by the members of the Worcester and Herefordshire branch. The members of the profession in Tewkesbury provided tea. The excursion to Dudley was also a great success.

The receptions of Dr. Willoughby Wade, Sir Walter Foster, and Mr. Wilson of Edgbaston were well attended and very successful. Not the least in importance was the reception given by Brigade Surgeon Manby and the members of the Midland Volunteer Medical Association at the headquarters of the 1st Volunteer Battalion of the Warwickshire Regiment. It was largely attended. The meeting may be summed up in the words of the President: "This meeting will go down to history as one of the most successful which we have ever held."

We continue this week our report of the work carried on in the various sections of the Association.

MEDICINE AND THERAPEUTICS.

Mr. BENDELACK HEWETSON read a paper on Localisation as an Aid to Diagnosis and Treatment of some forms of Headache. Many persons suffering from headache have no idea that it is due to ocular trouble. He had been working for fifteen years at this subject. Localised pains in the head had their respective causes. Migraine in many cases was curable by proper lenses being always worn. He had found that, in neurotic persons with ocular defects accompanied by insomnia, by correcting the eye condition the insomnia improved. In neurotic persons with some form of hypermetropia there was frontal headache extending over the parietal region, and pain also over the vertex; in these there was superficial tenderness of the scalp. Neuralgia of the back of the head and neck, and a tender spot on the top of the head, might also be due to ocular fault. In some cases there was often a tender spot complained of in the temporal region from disease of the upper molars. In iritis, along with pain in the eye there is pain in the back of the head on the same side. Myopia, with astigmatism, caused giddiness, but not pain. Hypermetropia on one side and myopia on the other were exceedingly difficult to cure, and he had quite failed in the attempt. One case of epilepsy had been cured by lenses, and they often cured petit mal. Peculiar frontal headache, pain down the side of the nose and a muddled feeling in the head occurred in nasal stenosis; and pain in the eye and inside of the nose from caries of the lateral incisors. He dwelt upon the great importance of correcting errors of refraction in children, as preventing them growing up into neurotic subjects.—A discussion followed, in which the relation between defects in the eye and headache was fully brought out. Reference was also made to the possibility of defects in the muscles being the cause of headache without errors of refraction.

Brigade-Surgeon HAMILTON read a paper on "Enteric Fever in India." He believed enteric fever had long been present in India, although at one time it was not recognised, and now, as the number of cases of enteric increased, other fevers diminished. He gave figures showing the importance of this subject, the proportion of the troops affected, and what this sickness cost the country, and dwelt upon the influence of age in determining liability, the younger men suffering more than the older. Other causes were heat and over-stimulating diet, but these did not account for all the cases. Fæcal fermentation and imperfect water-supply were not the cause. He disbelieved in filters. The great cause, he thought, was the dirt by which the troops were surrounded. The milk-supply was also very faulty, and greatly exposed to adulteration. He advocated the establishment of Government dairies. Plunge baths were also very filthy. As regarded the symptoms, they were much as they were in this country, constipation being more common than diarrhœa. The treatment was the same as at home. A motion was proposed asking the Parliamentary Bills Committee to take up the subject of milk-supply to the troops in India as suggested by Dr. Hamilton. Several speakers testified to the shameful sanitary conditions in which cattle and milk were kept.

Prof. MCWILLIAM then gave the results of an experimental investigation into the Action of Chloroform and Ether. The experiments were made on cats, and simultaneous tracings were taken of the heart, both left auricle and ventricle, and of the vessels. The results were (under chloroform) first a fall of pressure, as is known, but there is a change in auricle and ventricle, which is partly a weakening of beat; but what is more important, auricle and ventricle become dilated. These results were obtained before the conjunctival reflex was obliterated. Under ether the action of both auricle and ventricle went on unimpaired, and certainly there was no dilatation of the chambers. The dilatation under chloroform is not due to fall of blood pressure, for it occurs without it. He did not think the opening of the thorax and artificial respiration invalidated

his results, and gave reasons and experiments to support this. He found that death did occur in some cases from circulatory failure, all the chambers being dilated. This explained the failure of the Hyderabad Commission to bring their animals round by artificial respiration, although they held that death was due to respiratory failure. The general conclusions arrived at were as follows:—1. When chloroform is given mixed with abundance of air, dilatation of the heart commonly occurs to an appreciable degree, even before the conjunctival reflex is completely abolished. 2. This dilatation affects all parts of the heart more or less; it is not confined to the right side, and is not due to changes in the pulmonary circuit. 3. The dilatation is not due to the fall of blood-pressure with its various accompaniments, mechanical and nutritive. 4. There is usually no marked change in the rate of the heart's action when dilatation occurs. 5. When the heart becomes greatly dilated, it fails as an efficient force in keeping up the circulation; its rhythmic movement goes on for a time unchanged in rate, but so feeble as to be ineffective. 6. The failure of artificial respiration to bring about recovery in some cases when collapse has occurred from chloroform poisoning, and when artificial respiration has been begun directly the natural respiration ceased, is in all probability due mainly to the distended and enfeebled state of the heart, which is unable to maintain the circulation. 7. The depressing influence of chloroform on the heart, leading to distension of its cavities, is not exerted through the vagus nerves, but is a direct effect of the drug on the cardiac mechanism, and in all probability upon the cardiac muscle. Section of both vagi does not obviate or remove the weakening and dilating influence (apart from change of rate) which chloroform exerts upon the heart. 8. The weakening and dilating effects of chloroform are sometimes manifested in tolerably equal degree upon both auricles and ventricles, sometimes more readily and markedly on the auricles and sometimes on the ventricles. 9. Some time after the chloroform has been given, when its maximum effect in lowering the blood-pressure is over, and the pressure has again risen to some extent, there is to be seen in some instances a peculiar periodic depression of the ventricular action. 10. The contrast between the relation to the heart of chloroform and ether in anæsthetic doses is very marked. With ether abolition of the conjunctival reflex has not been attended with any marked depression of the heart resembling that seen in the case of chloroform. Any dilatation that has occurred has been extremely slight and transient; on the other hand, effects of a stimulating nature have often been observed in the heart. 11. Under the influence of chloroform a temporary slowing of the heart sometimes occurs. This change is quite different in its nature and causation from the dilatation without change of rate before mentioned. The slowing is not a direct effect of the chloroform upon the heart, but an indirect effect brought about through the vagus nerves. It does not appear, as far as has been seen, to be dangerous in the healthy animal. 12. The fall of blood-pressure under chloroform is in the earlier stages usually due to the depressing influence of the drug upon the vaso-motor centre, preceded often by a slightly stimulating effect. The later stages of a great fall of blood-pressure are commonly associated with a failing condition of the heart, as well as of the vaso-motor centre. 13. The relative sensitiveness of the heart and the vaso-motor centre to the depressing influence of chloroform appears to vary considerably. 14. The fall of blood-pressure under chloroform is in a certain sense protective; it retards the access of chloroform to the vital tissues. 15. When chloroform is very suddenly taken into the pulmonary capillaries, the heart may become seriously affected before the pressure has fallen greatly—before the vaso-motor centre has become much depressed. 16. An amount of chloroform which is quite innocuous if given during ordinary breathing may speedily become dangerous if given during rapid deep respiration. 17. A certain percentage of chloroform in the air inhaled gives no security against an overdose; for a percentage that gives safe anæsthesia during easy breathing may produce very grave results during deep and rapid respiration. 18. Changes in the respiration are of the greatest importance in determining the amount of chloroform taken in. Changes are often induced by sensory stimulation during imperfect anæsthesia, (e.g., by operative interference, the administration of chloroform vapour with insufficient air, &c.).

Dr. WALKER DOWNIE read a paper on Intra-laryngeal Injections in the Treatment of certain Laryngeal and Pulmonary Affections. His conclusions were that menthol was a local anæsthetic, a powerful stimulant, and an antiseptic. He regarded this method preferable to inhalations. In the majority of his cases suffering was alleviated.

Dr. SAUNDBY proceeded to deliver a paper on the Varieties of Hepatic Cirrhosis. He said that, in conformity with modern pathological investigation, he divided hepatic cirrhosis into ten varieties: (1) Alcoholic, (2) cardiac, (3) biliary, (4) diffuse syphilitic, (5) gummatous, (6) tubercular, (7) malarial, (8) scarlatinal, (9) rachitic, and (10) diabetic. Some of these forms, notably the tubercular, the scarlatinal, and the diabetic, had no clinical history whatever, and this also to a considerable extent was true of the cardiac and gummatous varieties. In all of these the lesion might be so slight as to give rise to no signs during life except some enlargement of the liver. On the other hand, their naked-eye and microscopic appearances were usually characteristic and readily recognised post mortem. These were illustrated by specimens of livers and microscopical sections. Clinical interest centred in the alcoholic form with its usually well-marked symptoms. But it was important to note that this, too, might exist without causing such derangement of health as to call for medical assistance. In these cases there was no ascites, but there was a great liability to death from hæmatemesis, due to the rupture of the dilated gastric or œsophageal veins by which the blood from the portal system reaches the superior vena cava. Yet the condition of these patients is greatly to be preferred to that of those who, swollen with ascites, are wholly invalided. It was therefore desirable to attempt to reduce the latter to the former condition. This might be done by early and repeated tapping, and a case of six years' standing was shown to illustrate it. Pathological specimens of the varicose, gastric, and œsophageal veins were also exhibited. The not uncommon termination of alcoholic cirrhosis with symptoms of malignant jaundice was emphasised. The symptoms, where any occur, and pathological characters of the other forms were briefly sketched. Special attention was directed to rachitic cirrhosis, which was frequently supposed to be syphilitic—a view that receives some support from the benefit derived from the use of mercury in small doses. He did not follow the pathological classification because he held that etiology was in the present state of medicine the best basis of classification.

Dr. STACEY WILSON followed with a paper on Varices as a Cause of Hæmatemesis in Cirrhosis of the Liver. He drew attention to the dilatation which took place in the veins in the lower part of the œsophagus, this dilatation from the establishment of collateral circulation preventing ascites in some cases. He pointed out the effect of the sphincter of the cardiac end of the stomach in preventing the blood of the coronary vessels getting into the œsophageal branches in normal conditions, but when portal obstruction occurred, the tension in the coronary vessels overcame the action of the sphincter, and the œsophageal veins became varicose and might rupture, and he thought this was a common cause of hæmatemesis. He had found œsophageal varices in five cases of hepatic cirrhosis, and in most of these there was rupture.

Dr. RATCLIFFE showed specimens of Varicose Ulcers in the Œsophagus, and one in which there was thrombosis of one of the œsophageal veins, from cases of hepatic cirrhosis in which hæmatemesis had occurred.

In the discussion that followed, Dr. Thomas said that, seeing ulceration might be the cause of hæmatemesis in these cases, it would influence him in the food he gave. He said that in beer drinkers there occurred a hypertrophic liver which went on to atrophic cirrhosis.—Dr. Broadbent referred to the excellence of Dr. Saundby's paper and the cases which had been brought forward. He was not aware of the part the œsophageal veins played in hæmatemesis, and regarded it as a point of importance.—Dr. Handford thought another form should be added to Dr. Saundby's list, which he called interstitial hepatitis. He doubted whether some of the cases referred to went on to what could properly be called cirrhosis. He thought the scarlatinal form should be called febrile. In the diabetic form he considered the appearance due to dilatation of the capillaries, and that it could hardly be called cirrhosis: the liver cells in this form were atrophied. He also referred to the importance of diet seeing the function of the liver cells was so much affected.—Dr. Drummond said he was rather disappointed that there had not been

more attempt to define the symptoms of the various varieties. He had another form to add, due perhaps to swallowing tobacco juice. Another variety which he was prepared to insist upon was acute alcoholic biliary cirrhosis, some cases of which he described.

Dr. SUCKLING, after the conclusion of the foregoing discussion, gave a demonstration of a number of interesting cases, including Friedrich's Disease, Cretinism, and Hammer Palsy, and Exhaustion Paralysis.

SURGERY.

Mr. GREIG SMITH, in introducing the subject of the Operative Treatment of Acute Intestinal Obstruction due to Internal Strangulation, stated that the procedure should be varied according to the condition of the patient and the state of the gastro-intestinal tract, and pointed out the error of attending only to the relief of strangulation. He divided the cases clinically into three classes, according to the gravity of the condition, and detailed the operative procedures for each. 1. *The comparatively favourable:* In these complete operation was proper, as the intestines were capable of self-recovery. After an inspection of the bowel and, if possible, relieving strangulation, it was necessary in many cases to empty the distended portion by small incision and the insertion of a tube, allowing the contents to drain away gradually, otherwise obstruction continued owing to the paralysis of the over-distended bowel. 2. *The unfavourable:* Complete operation was proper if not prolonged, and intestinal evacuation or drainage essential. The propriety of anæsthesia if the stomach was distended was doubtful, and artificial emesis with the stomach-tube was sometimes advisable. Intestinal percussion and auscultation were valuable as guiding to the seat of obstruction, and perhaps modifying the site of incision. The danger of extensive exploration if the obstructing cause was not readily found and the necessity of relieving excessive intestinal distension by intestinal evacuation and drainage were pointed out. Anæsthesia might in most cases be stopped when the parietal incision had been made. 3. *The almost hopeless:* Complete operation was improper and general anæsthesia forbidden, intestinal drainage by rapid and simple operation giving the only chance of life. Local anæsthesia, momentary exploration with the forefinger, and the performance of enterostomy were required, the subsequent treatment being dependent on the progress of the case. In all cases it should be remembered that a complete operation might result in the death of a patient who might be saved by operation in successive stages. As a general principle the speaker urged the importance of early operation, and deplored the resort to opium as tending to mask symptoms, to cause paralysis of the bowel, and cause a deceptive appearance of relief which delayed surgical treatment till too late for success. In the discussion which followed, as far as it dealt with the points specially selected for consideration, the opinion of the speakers was generally in support of Mr. Greig Smith's conclusions. In his reply, Mr. Greig Smith dealt with the importance of digital exploration through a small incision instead of the insertion of the whole hand, but stated that prolonged practice in the post-mortem room was necessary before the requisite skill could be acquired.

Mr. WATSON CHEYNE read a case of Internal Derangement of the Knee-joint, due to displacement of the ligamenta alaria. He also read a paper on operation in cases of complicated fracture extending into joints, illustrated by cases of fracture of the head of the radius in which the loose portion was removed, fracture of the neck of the femur in which the trochanter and neck were pegged together, and complicated fracture about the elbow-joint, and old-standing dislocation of the patella complicated with fracture.

Mr. KENDAL FRANKS dealt with the value of early Massage in Simple Fractures, Dislocations, and Sprains. If properly performed, the process of union and the restoration of function were hastened, while the liability of adhesions in cases affecting the joints was greatly reduced.

Dr. W. BRUCE CLARKE read a paper on Obscure Affections of the Bladder and their Diagnosis by means of the Cystoscope. After pointing out how rarely it was that the cystoscope was required in the diagnosis of bladder tumours, cystitis, or other obscure affections of the urinary tract where the disease was well established, the author went on to state that it was of immense service in the earlier stages of the disease; and that even in the later stages there were cases, as the following notes would show, in which the diagnosis could not be arrived at by the symptoms alone, but demanded an examination either with the cystoscope or by exploratory incision. The first which he had to relate began with an attack of gonorrhœa, in which some urethral bleeding occurred. On subsequent occasions it returned at intervals without any apparent exciting cause, in amounts that were very alarming to the patient. It was usually accompanied by cystitis, and the cystitis and the bleeding soon passed off. No certain diagnosis could be arrived at for several years, but the cystoscopic examination revealed a villous tumour, and its removal relieved the patient of all further trouble. In another case, which was shown by the cystoscope to be one of cystitis, the bleeding, which was a prominent symptom, was at one time supposed to be due to a malignant tumour. A third case which somewhat resembled this one proved to be a malignant tumour; and a fourth case, which was characterised by great vesical tenesmus and other symptoms of acute cystitis, turned out to be an encysted calculus. There were cases of ulcer of the bladder, probably of tubercular origin, in which the cystoscope alone could reveal the true state of affairs. It was a correct diagnosis that was required, and this could often only be obtained by the cystoscope. The paper was illustrated by drawings &c. of the conditions referred to.

Mr. HURRY FENWICK and Mr. BRUCE CLARKE exhibited models and drawings and quoted cases illustrating the value of the Cystoscope in affording early and exact information in the Diagnosis of Obscure Vesical Disease. In the case of male children, the instrument could be introduced through a perineal incision if necessary. Reference was also made to the value of lactic acid solution (1 per cent. strength, gradually increased to 4 per cent.), and of an iodoform emulsion (5 gr. to 1 oz) in "tubercular" ulceration of the bladder.

Mr. MAYO ROBSON recommended tapping and draining the ventricles in certain cases of Acute Hydrocephalus, which, if left alone, the patients soon became comatose and died without any localising symptoms. Advantage might be looked for from the relief of pressure, and the good results of drainage in effusion into other serous cavities, notably the peritoneum and pleura, even in tubercular cases, offered a favourable analogy. In regard to chronic cases, he did not as yet express any definite opinion.

Mr. HEUSTON advocated sulphite of zinc as an antiseptic, as being double the strength of mercuric chloride and non-irritating.

Mr. DAVIES-COLLEY described a new operation for closure of the hard palate by flaps reflected upwards and downwards respectively on the opposite side, the two raw surfaces being then brought together to form the arch.

OBSTETRIC MEDICINE AND GYNÆCOLOGY.

In this Section Dr. MURDOCH CAMERON introduced a discussion on the Relief of Labour with Impaction. The author explained in his paper that the term "impacted labour" implied those cases which would be impacted if the labour were allowed to proceed. He pointed out that it had been a recognised rule in midwifery that no woman should be allowed to die undelivered without some attempt being made to save her and her offspring; or at least to save her, if at the expense of the child. Differences of opinion had always existed, however, due no doubt to religious influences and to the personal feeling of the husband. Napoleon was one of those men who, when he was appealed to by Dubois, could say, "Treat the Empress as you would a shopkeeper's wife; and if one life must be lost, by all means save the mother." In marked contrast to him we have Henry VIII., who said, "Save the child by all means, for other wives can be easily found." He went on to give the preference to this method instead of craniotomy, in order, if possible, to save both lives, and enumerated cases to show how craniotomy necessitated repetition in subsequent pregnancies. He urged that every medical man should be able to form an estimate of the pelvic contraction, and to decide whether the case could be terminated by the natural passage or by section previous to the coming on of the labour. He described the methods of combating hæmorrhage on opening the uterus, and gave it as his opinion that no more bleeding should take place than in a normal delivery. Craniotomy, on the other hand, he would reserve for cases in which the child was dead or the subject of disease, but

advocated simply deep suture wound, which would include the outer two-thirds of the uterine wall. Sanger's method he characterised as needlessly complicated, and strongly condemned Mr. Tait's proposal to perform Porro's operation in placenta prævia. During the past two years he had over twenty cases, both public and private. He contented himself with the assurance given by Mr. Tait in his paper—viz., that he had not practised midwifery for nearly a quarter of a century—otherwise his suggestion might call for severe comment. He mentioned three cases on which he had operated. The measurements in the outer conjugate diameter were respectively 1½ in., 1 in., and 2 in., and in all of which both the mothers and the children were saved. In the discussion which followed, Drs. Cullingworth, Lawrence, More Madden, Bantock, and others took part.

Dr. THOMAS MORE MADDEN (Dublin) read a paper on Ovarian Herniæ. He pointed out that ovarian herniæ were amongst the most neglected, although clinically they should be included amongst the most important, of the troubles that occurred in gynæcological practice. In the great majority of cases they occur downwards into Douglas's space, and in such instances the left ovary is that most frequently displaced. The next in point of frequency of these herniæ were those occurring in the inguinal regions, where they were either found above Poupart's ligament or more commonly they follow the course of the canal of Nuck downwards and forwards, and so present in the labia, where they may be readily recognised. In the former, or directly downward variety of displacement, the ovary may be discovered on vaginal examination in the recto-vaginal fossa as a small, oval-shaped, firm, elastic, and highly sensitive tumour, bulging forward into the post-cervical cul-de-sac. In the larger number of cases ovarian herniæ, especially those in Douglas' space, result from the *vis a tergo* of abdominal or uterine tumours, or from the tension on the appendages occasioned by displacements of the uterus. Until recently these herniæ when inguinal were very generally confounded with enlarged glands; when labial with other tumours in that situation; and when downwards with pelvic abscess and hæmatocele. Or, as often happens, they are mistaken for the retroflexed fundus uteri, and the patient suffering from an ovarian prolapse is vainly treated for a non-existent retroflexion or retroversion of the uterus. There can now be no excuse for such errors. The sudden occurrence of the tumour, its physical character, the peculiar dull sickening pain, and the extreme tenderness and nausea manifest on examination are sufficient to enable a correct diagnosis to be made by any competent gynæcologist. Where the ovarian hernia takes place through either of the abdominal rings or downwards into Douglas' space, it may in some instances be reduced, as any other herniæ similarly situated. In the majority of cases, however, such herniæ are irreducible when discovered, and must either be supported in the former case by applying a hollow truss, or, in the latter case, the prolapsed ovary must be replaced if possible and kept in position with a peculiar form of pessary (exhibited) specially devised by Dr. More Madden for the purpose; or failing this, if the symptoms be urgent, the ovary must in some cases be removed.

PATHOLOGY.

The President of this Section, Dr. D. J. HAMILTON of Aberdeen, took for the subject of his address the Pathology of Gastric Dyspepsia. Instead of delivering to them an address on one of the many abstract themes relating to the science of medicine, it had seemed to him that he might enlist their sympathies more heartily if he took as his text some disease whose pathology was of present interest, and which had a direct bearing upon everyday practice. Such a subject was "gastric dyspepsia." The impression is, he thought, almost general that in a large proportion of dyspeptics the first disruption in the natural chain of events took place in the stomach, and it was to the pathology of these cases, and more especially to the form known as "acid dyspepsia," that he would now briefly claim their attention. There is one fact which appears to be clearly enough made out—namely, that in a large majority of cases of acid dyspepsia there is no evident anatomical lesion of the organ to which the malconcoction of the food can be referred. His own experience led him to place little reliance on the morbid histology of the human mucosa, where, for instance, the condition of the epithelium and glands was a matter of question. It was most difficult to get hold even of an unaltered healthy human stomach. Thinness of the walls was often enough a feature of the stomach in chronic dyspeptics, more especially where the organ was dilated, and Fenwick stated that the glands were atrophied in such cases. Sachs had attempted to show that in chronic feverish states of the body the marginal cells shrank or took on a hydropic swelling. Were the conditions such as to permit of a reliable examination being made, no doubt minute alterations would be found, at least, in instances of chronic dyspepsia, but in the majority of cases, all matters considered, they were bound to conclude that gastric dyspepsia in the first instance was a purely functional derangement. By the term "acid dyspepsia" he understood a condition in which the individual experienced, some time after the ingestion of food, a feeling of burning pain in the epigastrium; suffered from eructations which imparted to the mouth the feeling of acidity; in which digestion of the meal was delayed; and in which the feeling of burning pain was relieved—it may be only temporarily—by the administration of sodic bicarbonate or other such salt with eructation of liberated carbonic acid. Not only was there a feeling of acidity, but recent researches showed that an increased quantity of acid is present, and that the acid is often the wrong acid. Considering the acids of natural digestion, it was universally admitted that hydrochloric was the acid which conferred acidity on the gastric juice. In the course of natural digestion, however, a large quantity of lactic acid was forthcoming, and under pathological conditions butyric and other acids might make their appearance, or the acidity might in part be occasioned by acid phosphates. Hirsch found the quantity of hydrochloric acid in human gastric juice to be at least 2·5 per mille. After a rich meal, however, the quantity of this acid found in the stomach contents became greater than it was in the gastric juice itself (3·57 per mille), and new acids made their appearance. The quantity of hydrochloric acid, however, seemed to vary with the nature of the diet and the period of digestion at which the observation was made. But hydrochloric was not the only acid present in the stomach during normal digestion. Lactic acid was a constant element of the gastric contents at one period in the digestion of a mixed meal. It was sometimes present when single articles of diet had been consumed. Ewald and Boas's researches on the human stomach, showing that in the digestion of lean meat there are three distinct stages, were then detailed. The important practical point, however, for them to remember was that in the digestion of a mixed meal two acids made their appearance, and always in a particular order. Lactic acid was the cause of the acidity in the first instance, hydrochloric in the second. The lactic acid seemed to be derived from two sources—namely, from the fermentation of carbohydrates and from the meat consumed. In the latter case, it seemed to be simply dissolved out. Richet gave to this the name of "meat lactic acid," and Ewald and Boas called it "paralactic acid." Lactic acid fermentation could be readily produced artificially by placing white or black bread with water in a warm chamber. It appeared to be clearly made out, however, that the better the stomach was working the sooner the lactic acid called forth by a mixed diet disappeared, and was replaced by hydrochloric; and it was when the hydrochloric acid was alone present that digestion was most active. It was not quite clear what came of the lactic acid; it might be simply absorbed. Maly supposed that it might be converted, along with the chlorides, into hydrochloric acid. He then passed to the causes of acid dyspepsia. In the commonest form of acid dyspepsia, the acid which seemed to be present in greatest quantity was lactic. Along with that there might be volatile acids, such as butyric and acetic, but the quantity of hydrochloric acid seemed to be relatively small. The lactic acid stage was prolonged, and digestion could not proceed further without the advent of fresh hydrochloric acid. Besides, instances of acid dyspepsia caused by the mere prolongation of the lactic acid stage of digestion, there appeared to be others in which lactic acid was furnished in too great quantity. The source of it under these circumstances seemed to be the sugar taken as food. When the abnormal conversion into lactic acid of grape sugar occurred, the interchange appeared to be caused by fermentation organisms, which were always more or less abundantly present and adhering to the mucosa. In course of time a further transformation may supervene, in that the lactic acid splits up into butyric acid, carbonic acid, water, and hydrogen. This further interchange was also brought about by micro-organisms; but in so far as these were not so-

constant in the stomach as the foregoing, it was not always that the morbid decomposition went on so far. The stomach under these circumstances contained torulæ, sarcinæ, and many other vegetable parasites in abundance. The gas-forming organism, however, did not appear to be either a torula or a sarcina, but a bacillus. McNaught had succeeded in isolating the organism and growing it artificially in Pasteur's fluid. Gas was freely liberated, which burnt with a blue flame, and probably consisted of H and CO_2. In addition to these forms of acidity, due to the presence of lactic acid and its derivatives, there appeared to be cases which were to be accounted for by the hydrochloric acid being in too great quantity. Thus the hydrochloric acid might be secreted in such volume and so rapidly that it almost immediately neutralised the alkaline saliva, and consequently left masses of starchy food untransformed in the stomach. There seemed to be conditions of the stomach in which the neutralisation occurred far too rapidly, and so the starchy food remained undigested, and conferred a sense of uneasiness upon the individual. The work of transformation would, under these circumstances, have to be borne chiefly by the pancreas. In the variety of hyper-acidity from hydrochloric acid just referred to, the acid was secreted only on the introduction of food. There appeared, however, to be a condition, not very uncommon, in which gastric juice, highly acid from the presence of hydrochloric acid, was secreted during fasting. In the year 1882, Reichmann drew attention to the fact that the functions of the stomach might be so altered that the organ in its fasting state continued to secrete gastric juice. The secretion was sometimes very acid. V. den Velden recorded a number of cases occurring in men, and accompanied by vomiting &c. He found that during the intervals of meals a large quantity of acid gastric juice can be drawn off by the pump. Riegel said that it might last for several years without any notable symptoms. In time, however, the individual develops pain in the epigastrium, water-brash, acid eructations, or accompanied by vomiting. He said that it was always followed by dilatation of the stomach. Peptone was in abundance within such stomachs after a mixed meal, and so was propeptone, but the starchy matters were practically unaltered. The pain from which such individuals suffered was due to the ends of the sensitive nerves of the cardia being stimulated by the excess of acid and by the undigested amylaceous remains. *Conclusions:* In summarising the foregoing results it was found that: 1. The acid which gave the disease its peculiar character was usually lactic, but in rare cases might be hydrochloric. In still other cases the acidity due to lactic was augmented by the presence of various volatile organic acids. 2. The excess of lactic acid might be a result of prolongation of the natural lactic acid stage of digestion, or it might be furnished by the grape sugar developed from the sugars in a dietary. A small part of it was possibly grape sugar resulting from the action of salivary diastase upon starch. 3. The cause of the prolongation of the lactic acid stage of digestion was the deficiency in hydrochloric acid, which ought naturally to take the place of the lactic. 4. The fermentation of the grape sugar into lactic acid was brought about by living vegetable organisms, always more or less abundant in the stomach. This fermentation most likely was permitted by deficiency in the quantity and proteolitic quality of the gastric juice. The carbohydrates consequently underwent a wrong decomposition, while the proteids remain undissolved. 5. In those cases where acidity was caused by superabundance of hydrochloric acid the excess of acid manifested itself in two ways: (*a*) where the acid was secreted in a gush immediately on the introduction of food, and (*b*) where it accumulated in the stomach during fasting. In both cases the effect was to neutralise the alkalinity of the saliva too soon, and thus hinder the digestion of starchy food, which accordingly stimulated in the stomach and acted as an encumbrance. The remainder of the address was devoted to the methods of quantitative and qualitative analysis for acids, and the testing of the digestive capability of the gastric digestion.

Professor OSLER (Baltimore) read a note on the occurrence of Amœbæ in the Lesions of Dysentery. These organisms had been found on the ulcerated mucous membrane, in the wall of the bowel, and, after perforation of the bowel, in the peritoneal cavity. Their etiological connexion he did not consider proved, but it was to some extent indicated by their presence in hepatic abscesses arising in connexion with dysentery. At any rate, a knowledge of their frequent occurrence in dysenteric lesions had proved of value in a case where hepatic abscess had been correctly diagnosed from their presence in the expectoration, the abscess having ruptured into the air passages. Professor Osler was inclined to think that these organisms were associated with some special form of dysentery. Dr. M. A. Ruffer gave a lime-light demonstration to illustrate the war waged between animal cells and the invading micro-organisms. Dr. Ruffer's investigations on this head had led him to range himself on the side of Metchnikoff and his school. Admirable illustrations were thrown on the screen showing the transport and destruction of micro-organisms in the animal cells of Peyer's patch in the rabbit, the tonsil of the dog, in diphtheritic membrane of the human subject, and in experimental quarter evil of the guinea-pig. Mr. Ballance and Dr. Sherrington demonstrated the results of an investigation carried out with the object of determining the relative parts played by leucocytes and fixed connective tissue cells in the formation of cicatricial tissue. The method followed was that first adopted by Ziegler—viz., the introduction under the skin of a small chamber constructed by cementing together two small thin cover-glasses, a small aperture being left by which cells could penetrate between the two glasses. Their observations had led them to conclude that the Cohnheim-Ziegler theory of inflammatory new tissue was incorrect. The cover-glass films showed two varieties of cells—viz., leucocytes and plasma cells,—the latter being derived from the fixed connective tissue cells. The formation of new fibrous tissue was exclusively the *rôle* of the latter, and in the process of organisation they were unable to assign to the leucocytes any higher function than that of furnishing aliment to the plasma cells.

Dr. W. HOWSHIP DICKINSON exhibited a series of macroscopical and microscopical drawings illustrative of various Morbid States of the Tongue, the changes represented being chiefly those produced in the organ by diseases external to itself. A number of diseased conditions proper to the tongue itself, such as glossitis, annulus nigrans, and leucoplakia (in a smoker) were also shown.

Mr. WATSON CHEYNE exhibited a highly instructive series of specimens to illustrate the pathology of Tubercular Diseases of Bones and Joints. The series included examples of the principal types of synovial disease, the mode of formation of soft deposits in bones, the formation of tubercular sequestra, destruction of articular cartilage, caries of the ends of bones, and tubercular periostitis and osteo-myelitis. Specimens illustrating pathology of chronic abscess were also exhibited and described.

Professor J. MCFADYEAN (Edinburgh) discussed the Comparative Pathology of Tuberculosis, his remarks referring to various points of difference and resemblance observable in the disease in man and the chief domesticated animals. He pointed out that the descriptions usually given of the histology of the miliary tubercle in text-books of human pathology were not applicable to the miliary tubercle of the ox, horse, and other lower species, and that a great many lesions excited in the lower animals by the tubercle bacillus were not tubercular in the literal sense of the word, but rather of the nature of diffuse destructive infiltrations, or new formations simulating actual neoplasms. New vessels were abundantly formed in many of these. Other points touched upon were the characters of the bacillus in different species, immunity, susceptibility, and heredity. He held it proved that in the case of the bovine species the transmission of the tubercle bacillus from parent to fœtus was rare, and that probably the same was true of the human subject. The paper was illustrated by a large series of microscopic specimens.

Mr. W. K. SIBLEY gave an interesting account of the Lesions of Tuberculosis in the Sauropeida. His observations had been made on several species of birds, and he had also proved that tuberculosis may occur in the snake. The distribution and histology of the lesions in the fowl and snake were minutely described.

Mr. ADAMS FROST exhibited on the screen a beautiful series of lantern-slide drawings to illustrate the Physiological and Morbid States of the Fundus Oculi, and this was followed by a communication by Dr. ALEXANDER BRUCE (Edinburgh) on the relations of the Nuclei of the Third Nerve to Ophthalmoplegia. Selenka's electric light microscope was used with good effect to illustrate this paper by projecting microscopical sections on the screen.

Dr. G. SIMS WOODHEAD gave a demonstration of a number of Diseases of the Lungs, chiefly those associated with tuberculosis. By means of a series of beautiful macroscopic and microscopic sections projected on the screen, the distribution and progress of tubercular lesions in the lung were brought out with admirable clearness.

Dr. MOTT described and illustrated by projections of micro-photographs and specimens the Minute Anatomy of the Spinal Cord, tracing the relations of the cells and fibres, and pointing out the great importance of a knowledge of these points as bearing upon morbid states of the cord.

Dr. HERBERT SNOW read a paper on Insidious Bone Lesions in Mammary Carcinoma.

Dr. SHERIDAN DELÉPINE exhibited a large series of macroscopical and microscopical specimens, illustrating a variety of morbid conditions of the Liver, Kidney, Spinal Cord, &c.

Dr. C. A. MACMUNN (Wolverhampton) read a paper on the Use of the Spectroscope in Medicine. After describing the instruments and apparatus required in spectroscopic analysis of morbid fluids and the methods of using them, he showed their application in the examination of bile, blood, &c., by projecting a large number of characteristic spectra on the screen.

Dr. BALL gave an excellent lantern demonstration to illustrate various Rectal Growths, such as piles in various stages of formation, adenomata, polypi, and carcinomata.

Dr. A. HAIG (London) read a paper on the Estimation of Uric Acid in Disease. He described the application of Haycraft's process to urine, blood, and the extracts of various organs and tissues, and dwelt on its advantages, which were, he said, that it was a comparatively easy process, applicable to small quantities, and that its errors were not of sufficient importance to interfere with its use for clinical purposes. Dr. Haig's results during the last five years had been constant, and agreed among themselves; they also agreed with the main facts previously known about uric acid, its excretion, and presence in various organs.

Dr. SYDNEY MARTIN gave a sketch of the Pathology of the Proteids of the Body. The proteids ingested as food, he said, became changed during digestion into albumoses and peptones, and were in the body reconverted into the proteids of the body. The proteids of the tissues underwent processes of metabolism (oxidation chiefly), which resulted in the formation of crystalline nitrogenous bodies, urea, uric acid, kreatin, &c. The intermediate stages were not known. The proteids in the body in certain pathological conditions underwent changes similar to those occurring in digestion with the formation of poisonous products. These poisonous products were albumoses and alkaloids. In conclusion, he entered into a consideration of the poisonous action of these products of pathological metabolism.

Dr. S. M. COPEMAN (London) described certain improved methods for the Clinical Examination of the Blood, and demonstrated: 1. The use of a tinted normal saline solution with the hæmocytometer, by which the differentiation of the white corpuscles was facilitated. 2. An improvement in Gowers' hæmoglobinometer, consisting of a screen which allows the passage of the transmitted light only, this providing against the fallacy caused by simultaneous reflexion. 3. The hæmotintometer, an instrument for determining the percentage of hæmoglobin in blood, and also for estimating any change in the nature of the blood pigment. 4. The hæmometer, a method of obtaining the specific gravity from a minimal amount of blood or other coloured or colourless fluid.

Dr. J. J. RIDGE read a paper on the Action of Alcohol on Micro-organisms and Cell Protoplasm. He described the effect of minute quantities on cell protoplasm, taking first its effect on the growth of vegetable cells, chlorophyll, corpuscles, &c., and secondly on animal protoplasm as exemplified by its action on the eggs of blowfly. He next described its effect on micro-organisms, the bacilli of certain fevers, of septicæmia.

PUBLIC MEDICINE.

A paper was read by Mr. Edward Sergeant upon the Prevention of the Pollution of Rivers. He argued that towns requiring pure water for their domestic supplies were in justice required to return the water used by them as pure as possible, at least they were bound to use the best appliances for purification. He instanced several towns which were at present purifying their sewage, and then described the processes in common use, dwelling principally upon the impurities from calico works and paper making.

Dr. T. C. THRESH (Manchester) read a paper upon the Pollutions of Rivers by Paper works. He contended that it was possible to reduce the pollution from paper works to a very small amount, and considered that there was no excuse for manufacturers to pollute rivers as they were at present doing with impunity. He suggested that County Councils should employ chemical experts to devise processes for preventing river pollution, which suggestions would be public property.

Mr. MUMBY, medical officer of health for Portsmouth, opened a discussion upon "The Compulsory Notification Act." He considered the chief advantages to be obtained by the adoption of the Act were:—(1) A more complete knowledge of the local incidence of zymotic disease upon the population, and its relations not only to locality, but to season, age, sex, employment, and mode of living; (2) the power of securing efficient isolation of first cases of infectious disease, and preventing the spread of epidemics; (3) the ability to carry out thorough disinfection in every case as it arose; (4) the prevention of the exposure of infected persons or articles, especially the prevention of the circulation of infected books by public libraries, and the keeping away from schools of scholars residing in infected houses. To reap the full advantages of the Act there was required:—(1) The coöperation of the medical profession, in notifying promptly; (2) the provision of ample accommodation in isolation hospitals by the sanitary authority; (3) a sanitary administration, active, energetic, and courteous.

Mr. THOMAS WALLEY (Principal, Royal Veterinary College, Edinburgh) read a paper on Meat Inspection and Tuberculosis, and said: In order that meat inspection should be properly carried out it was necessary that all animals intended for human food should be examined prior to slaughter by competent persons. Inspection of all animals prior to slaughter could not be carried out in all cases; for example, in those instances in which, as the result of accidents, it was found necessary to slaughter animals in places other than abattoirs, and also in the case of dead meat from foreign countries; but where animals were killed on account of injuries or sudden illness, the internal organs should be sent to a licensed abattoir or receiving house with the carcase for inspection, and as a guide to the inspector in his work. Further, all private slaughter-houses should be abolished, or where, as in small villages or towns, a public slaughter-house could not be supported, they should be licensed and placed under the direct control of the sanitary authorities. The microscope should be brought into requisition in dealing with the flesh of animals that had suffered from micro-parasitic or parasitic disease. The President (Dr. A. Hill) said it was rather extraordinary if they were receiving so much morbid meat that the number of deaths from pulmonary consumption had diminished 32 per cent. At the present time they had more meat and more milk, and tuberculosis was generally more prevalent, and yet there was less tubercular disease than ever in Birmingham. There was no proof that tuberculosis was contracted from eating meat. Dr. Walley had not given a single case of such. He could not conceive that because a cow had a little tubercular matter in the lungs it was unfit for food. On the motion of Dr. W. Russell (Edinburgh) it was resolved that it be remitted to the Parliamentary Bills Committee, to approach the Government with the view of obtaining the abolition of private, and the establishment of public, slaughterhouses, with skilled inspection of meat.

PSYCHOLOGY.

In anticipation of the discussion on Hypnotism, the Section became so overcrowded that it was necessary to move into another part of the building. This also speedily became full, and Dr. NORMAN KERR then proceeded to read a paper on the subject of the position hypnotism should occupy in therapeutics. The following is a brief abstract of his paper. The author said that as he read how, recently, medical men had expressed their surprise at the infliction of violence and the performance of operations without pain at hypnotic *séances*, he could not help fancying that these professional colleagues had been just awaking from a sleep as profound as that of the eleven thousand virgins of Cologne. He accepted practically all the alleged hypnotic phenomena as facts, but in hypnosis, after close watching he saw only a disordered cerebral state, an abnormal psychical condition with exaltation of receptivity and energy. But, he asked, was it a desirable or justifiable remedy? He gave reasons why he answered in the negative, and

illustrated his point by alleging that anyone could obtain relief from pain by becoming drunk, but that state afterwards aggravated the diseased condition. The few cases Dr. Kerr had seen apparently benefited would probably have yielded to ordinary treatment, but the patients resisted or were passive to that, while they looked forward to, believed in, and gave themselves up to the mesmeriser. Such cases would show a proportion of successes to the "faith cure," the "mind cure," or any other "cure." He denied that in inebriety or narcomania any medical expert of repute had found hypnotism of value. He himself had found its pretensions fallacious, its apparent benefit less frequent than that of sound scientific therapeutics, and at times only fostering the true inebriate diathesis. He therefore advised against the mesmeric treatment of this protean malady. But he employed, as did every intelligent physician, non-hypnotic healthy suggestion. To a trusting and receptive patient desirous to be cured of any ailment, the directions and prescriptions of a medical adviser with decided opinions were true suggestions of a safe, straightforward, reliable, and scientific character, an intellectual interchange of thought with a conscious and thinking being, not, as in hypnosis, a mechanical impression on an unconscious soulless mass. The dangers of hypnotism were very great. Each *séance* might bring the hypnotee more under the control of the hypnotist, ending often in the complete submission of the former to the will of the latter. A jelly-fish slavery without mental or moral backbone was infinitely worse than days of pain and nights of agony. Many lives had been wrecked through hypnotism. In the somnambulistic state subjects had been compelled by the operator's behest to commit crime. So serious were these evils that French surgeons had been prohibited from practising hypnotism in their army and navy. In view of all these possible dangers, Dr. Kerr could not understand why medical men in family practice should have been incited to hypnotise patients of both sexes and all ages in the daily round of domiciliary visiting. Surely the risk of groundless accusations by hysteric females were already plentiful enough without so ominous an addition. Dr. Kerr strongly deprecated public mesmerism, medical, philanthropic, or commercial, as degrading and disgusting, particularly the medical patronage and endorsement thereof. He hoped that Britain would soon follow the example of Holland and Switzerland, and prohibit such entertainments.

Dr. KINGSBURY read a paper on the same subject, in which he sketched a few prominent points in the history of hypnotism and dealt with some recent criticisms, and described the peculiarities of the two schools of Paris and Nancy. He discussed the dangers of hypnotism, and submitted that these had been much exaggerated. Legislation was thought to be necessary for the control of its application. He referred to the recent development of the subject, and briefly criticised the utterances of some celebrated men, including Charcot, Sir Andrew Clark, and others. Referring to Sir Andrew Clark's condemnation of hypnotism, he thought the opinions must have been uttered without serious forethought, and trusted that so learned and scientific an observer would reconsider his hasty verdict and take into account the evidence which was being daily adduced in favour of modern hypnotism before again expressing an opinion. Dr. Madden found the subject referred to in THE LANCET of 1827, and imagined because hypnotism was old that it was unworthy of consideration. He unhesitatingly pronounced against it, because it was uncertain as an anæsthetic, and because of its "*probable* injurious effects in hysterical and hyperæsthetic patients." Dr. Kingsbury proceeded to give details of patients in the cases of whom hypnotic suggestion had been made use of as a curative agent, and concluded by asking that even if there was a possibility of hypnotism being used by unscrupulous persons for criminal purposes, and it was not altogether denied, whether that should deter us from using it for legitimate ends? They did not refuse to use chloroform, morphia, chloral, or arsenic simply because they may in criminal hands become criminal agents. Should not rather the use of hypnotism be made illegal except in the hands of authorised persons, as is done in other countries? He thought it was high time for Parliament to stop all public exhibitions of mesmerism as degrading, and as serving no useful purpose; most foreign Governments had already done so. And he urged that, if on a more careful and exhaustive examination hypnotism was found to be a delusion, it should be abandoned; but if it was found to be useful, even in a limited sphere, they should try to rescue it from its present position, and elevate its use to the dignity of science.

After the lecture, Dr. LLOYD TUCKEY and Dr. KINGSBURY gave a demonstration of hypnotism on two gentlemen who had volunteered themselves as subjects. The subjects were put to several tests to elicit if possible the cerebral functions which were in abeyance. A book was put into the hand of the hypnotised person, and it was suggested that on the cover was a beautiful picture, and he was asked to describe it. This he did, putting in all the details.—Professor Gairdner, in the course of the demonstration, said he had a very particular reason for asking whether, if a patient had been taking morphia on account of disease, and had afterwards taken to cocaine, and by its use had become actually nearly an insane person, and that the question was raised at this moment of putting him into an asylum, what form of suggestion would be adopted in that case in the curative sense, to spare him from that necessity, and to restore him to the sound state? To this Dr. Kingsbury replied that there were such cases on record. He would endeavour to produce hypnosis more or less deep, and in that state suggest that henceforth he would have the greatest possible aversion to alcohol, morphia, cocaine, and such like, and that he would not have any necessity to use them. He had seen satisfactory results.—Dr. Gairdner asked whether the craving had again arisen.—Dr. Kingsbury said he had always suggested to these people that they would not have to rely upon hypnosis. The eye of a patient was then rendered insensible to the touch of a small piece of blotting-paper.—Dr. Warner asked how the condition affected the knee-jerks, and they were tested by Dr. Wigglesworth and found to be exaggerated.—Dr. Kingsbury was asked if he could, by suggesting that the limb was absolutely paralysed, prevent the knee-jerks. This was accordingly tried, but the suggestion did not affect the knee-jerk, which still remained exaggerated.—After the demonstration, Dr. Gairdner said he would leave the meeting in a somewhat different state of mind from that in which he entered it, and he had not the smallest doubt that many other persons present would be in a similar state to himself. His mind a great many years ago had been revolted by an exhibition of hypnotism in the drawing-room. At that time it seemed to be mixed up with so much humbug that he had a great aversion to the whole thing. The circumstances were such as to give the bent of his mind very much of the current implied in Dr. Kerr's remarks. While he did not doubt that there was a great psychic force here, still he had the strongest feeling, to use a Scotch expression, that there was something about it "no canny." It was not for physicians to tamper with. For the first time in his life since that occasion he had been able to-day to witness an exhibition of hypnotism which impressed his mind as genuine and honest and as tending to good. His sole object in speaking was to explain the reason of the change of attitude of his mind on the subject.—Dr. Clifford Allbutt referred to Dr. Norman Kerr's brilliant rhetoric, but failed to find in his discourse mention of any facts. All new facts, such as even the revolution of the earth and the movements of the solar system, had been discredited by men at first. If the profession did not take up the subject it was sure to fall into the hands of quacks. Dr. Kingsbury and Dr. Tuckey had brought forward facts. They wanted facts the cogency of which they as scientific men would be able to judge. In spite of the danger, he did not think they would be justified in throwing the whole thing overboard.—Dr. Hack Tuke had been much interested in the phenomena, and thought the subject had a direct medico-psychological bearing. Men like Laycock, Vane, and Carpenter had seen the value of this phenomenon. He gave instances of patients who had undoubtedly been benefited by it. It seemed, he thought, ridiculous to ignore the phenomena, and protested against people trying to prevent a medical man using any remedy which in his opinion might be useful. He protested against Dr. Kerr's paper, and recommended a study of a paper by Dr. Percy Smith.—Dr. Eddison (Leeds) thought they should endeavour to so govern public opinion that there should be no use of hypnotism as treatment except in the hands of skilled persons. The question to be considered was how far they could use it in their everyday work.—Dr. Yellowlees thought that nowadays nobody doubted the fact of hypnotism, and expressed himself pleased with the spirit in which both the demonstration

had been both given and received. A year or two ago it would not have been received so calmly. Hypnotism had suffered from the too enthusiastic advocacy of those who had believed in it. Two things deserved consideration. The first was the social question as to the possibility of criminal or evil suggestions and consequences arising out of this condition. It was all very well to say that the potent drugs in use placed individuals at the mercy of the practitioner. They were quite used to inducing a morbid condition, and they were justified in so doing if they could produce a permanent benefit; and if hypnotism was a remedy they ought to use it. But in hypnotism the patient was far more at the mercy of the operator. The remedy was liable to great abuses, and ought to be used under the greatest possible precautions. The other point was the potency for evil to the individual subject. He did not think it was possible to meddle with brains for any length of time without establishing a condition endangering the brain power. He felt so sure on that point that he would not use it except with the greatest possible consideration. He would ask whether they would allow their wives or their daughters to be hypnotised, except on the strongest possible grounds. If not, they had no right to hypnotise others unless upon the strong consideration.—Dr. Sibley recommended that experiments should first be tried on lower animals.—Dr. F. Parsons thought a committee should be appointed to investigate the whole question of hypnotism, and should give facilities for experiments upon lower animals, as well as human beings. Another speaker thought an inquiry by that Association would greatly assist Parliamentary action in the prevention of other than medical use of hypnotising.—Dr. Kingsbury, in his reply, thanked the members for the courteous manner in which they had received his paper on the subject. He had been timid in coming before the Association, knowing the strong views that had been expressed by many leaders in the profession. Dr. Norman Kerr had called this condition a disordered cerebral state. With that statement he joined issue. The demonstration they had seen was not a fair exhibition at all of therapeutic hypnotism. In seeing an ordinary hypnotic patient under treatment, medical men were not likely to be impressed by the experiment. For instance, in a case suffering from indigestion the patient was simply asked to fix his gaze upon some bright object. He had frequently hypnotised people with his cigarette case. In a few minutes they noticed that the eyes of the susceptible patient began to blink, and in a second or two the eyelids dropped altogether and the patient assumed a somnolent condition. But for therapeutic purposes it was necessary to induce a somnambulistic condition, and in some of his own successful cases only the lightest form of sleep had been induced. He held that condition to be simply akin to natural sleep, but produced by artificial means. Because it was artificially produced the brain was in a slightly different condition from that of normal sleep. They all knew in their own experience how vividly a dream would take possession of the mind in normal sleep; how pictures and landscapes which had no existence could be seen during sleep. He held that that was exactly analogous to the condition produced in most cases of artificial sleep. This was the state which Dr. Norman Kerr had called teetotal drunkenness. But he had seen a great many genuine ailments which had been cured by this light somnolent condition, of which he gave examples. For the statements which Dr. Kerr had made he cited no cases, and excused himself by saying that if he had done so he would have broken through the usages of the profession. He (Dr. Kingsbury) had cited cases, and he did not think that by so doing he had broken through the usages of the profession. Up to this time the profession had been a scientific profession, which accepted nothing without proof, and he thought that if Dr. Kerr had cited cases, even under initials, or without a name at all, there would have been no great breach of the strictest professional etiquette. He denied that any affinity existed between the subject and the operator, and said that the state could be induced without any very strong will or even concentration of mind by any fairly intelligent person. It had been stated that only functional diseases were amenable to this form of treatment, but he maintained that certain organic ailments were amenable to hypnotic suggestion. Perhaps that was effected mainly through the blood-supply and the enervation of the different tissues. He thought that Professor Gairdner's words were extremely valuable, and would be re-echoed through the land, and mark an era in the history of hypnotism.—Dr. Gairdner asked whether he had any personal experience in the raising of a blister by suggestion, to which Dr. Kingsbury replied that he had no personal experience, but that he did not doubt that it could be done.—Dr. Sibley asked if drugs were administered which otherwise would produce severe effects—for example, castor oil—and the patient told it would have no such effect, whether the result would be so. Dr. Kingsbury said in many cases the result was actually so. Dr. Kingsbury, in concluding, denounced all public exhibitions of hypnotism, and hoped that in future no medical man would be so unscientific as to condemn a therapeutic agent of which he knew nothing, or so unprofessional as to denounce in the lay press those medical men who employed it.—In moving the following resolutions, Professor Gairdner pointed out that there was an evident desire on the part of the members of the Section that the Association should take some kind of positive action on this subject; he therefore proposed: "That the subject of hypnotism should be considered by a committee of medical men, with the object of endeavouring to ascertain the true nature of its phenomena, and the propriety or otherwise of the value of its use in the treatment of disease, and that the council of the British Medical Association be requested to sanction the appointment of a committee for this purpose"; he also moved "that this Section protests in the strongest manner against public exhibitions, for unscientific and miscellaneous objects, and for the purposes of gain or amusement, of the phenomena of sleep, a practice which is antagonistic to public morality." He said the only question was, how far they could go in the expression of an opinion. He did not think that they could expect the State to suppress quackery of any kind. That must be done by correcting public opinion.

DERMATOLOGY.

In this Section Dr. P. G. UNNA (Hamburg) opened a discussion on the Nature and Treatment of Eczema. He recapitulated and emphasised his known views of the parasitic nature of the disease, examining and traversing the opinion of various authors from Willan down to Crocker, Liveing, and Jamieson. A paper was read on the same subject by Dr. Myrtle, in which he discussed the hereditary element in the etiology, and pleaded for recognition of the dartrous diathesis. He said he was convinced uric-acid diathesis had no influence in its production, but that strumous diathesis had. In this paper no notice was made as to parasitic diathesis. Dr. D. WALSH read a paper on Dermatitis as an Excretionary Symptom, alleging that the presence of such foreign substances in the blood as uric acid, sulphur, &c., set up eczema. In the debate which followed Dr. Showell of Brookiyn asked why, if the cause was parasitic, there was not more evidence that chronic eczema was infectious, and suggested that affections like rheumatism rendered the skin more vulnerable to the action of the germs.—Dr. Colcott Fox combated Unna's views, and stated that he refused to call lichen circumscriptus (which he acknowledged was seborrhœa) eczema seborrhoicum, as Dr. Unna did. He believed that the nervous system had much more to do with the causation of the disease than gout or rheumatism had.—Dr. Taylor (Liverpool) believed some cases of eczema to be secondarily parasitic, and beginning as a neurosis.—Dr. Bulkley (New York) dissented from Unna's views, and thought a great mistake would be made if it went forth from the meeting that any proportion of cases of eczema were parasitic.—Dr. H. G. Brooke (Manchester) agreed with Dr. Unna in sharply dividing acute from chronic eczema. The latter was always a parasitic dermatitis, as was very frequently the acute form, but he could not believe that all cases of acute eczema were parasitic. He thought the *onus probandi* as to whether acute eczema was not a neurotic affection must remain with those who supported the parasitic theory. Acute eczema might arise from nervous irritation as well as from parasitic causes, but that eczemas which had begun in that way might become contaminated with parasites of various kinds, such as those of the so-called seborrhœa, of pus, &c. It was, therefore, advisable to treat all cases on anti-parasitic principles, although it was not absolutely necessary in all cases. Attention should be paid to the internal and modifying influences.—Dr. Radcliffe Crocker insisted that there was a dermatitis *per se*, though it might become parasitic secondarily. Rectification of the

general health was often absolutely necessary to obtain a cure, which was impossible with antiseptic or local remedies only.

Dr. UNNA, in his reply, expressed his belief that since hearing his paper and engaging in the discussion many had come over to his side. Dr. Morris and Dr. Brooke both to a certain extent accepted his position. He had not adopted the ideas he expressed in his paper during a sleepless night, but upon careful and scientific investigation into the causes of seborrhœa. The facts he had observed were greater than he was. During the last four years he had become more convinced of the accuracy of his facts, and if he ventured to attribute this origin to most chronic eczemas he based his statement on careful observation. There had been quoted to-day 600 cases as having no infectious origin, but that depended upon the manner in which the inquiry was conducted. His own examinations had been thorough, quite of a different type from simply asking the patients whether any of their relatives or friends ever had eczema. If the observer would examine other 600 cases, perhaps the results of the second investigation would astonish him. No doubt there were difficult points in his theory, such as the explanation of acute eruptions on the backs of the hands or face. The probability was that in these cases the fungus was in that position before the outbreak, and had been brought into activity by flushing or some such cause. For that difficulty, however, he would not abandon his standpoint. Some twenty years ago Sir Erasmus Wilson was quite upon the same standpoint, and he asked why they would not tread in his footsteps. As to the therapeutics of the subject, while he always attacked the germs, he knew that very often soothing remedies were sufficient. If the skin assumed its natural condition, they must not assume that the germs were killed. One germ might produce the whole disease over again. This he illustrated by referring to weeds in a garden. Those who adopted his views did not say that the removal of the eczema removed the germs, but that afterwards the skin required particular attention. He had had such enormously good results that he very earnestly invited the whole Section to adopt his views as to treatment, by which he maintained they would have not half the number of eczematous adults in future life.

Dr. E. D. MAPOTHER read a paper on the Treatment of Psoriasis by Mercury. The author advanced much evidence in favour of the parasitic nature of the disease, and against the supposition that it was hereditary. It was not purely epiphytic, the microbe being distributed with the blood, very often symmetrically. All drugs which had been employed successfully for internal or external treatment were parasiticides, and mercury was by far the most reliable, and relapses were much less frequent after its prolonged administration. Hospital patients he had usually treated by inunction with mercurial ointment, but in private practice the white precipitate ointment, together with the internal use of blue pill or the protoiodide, was more suitable. This course was followed for about eight weeks, the eruption having in most instances disappeared about the sixth. For small isolated patches other local applications were described. A dietary largely non-nitrogenous, the husk of the cereals being specially excluded, would limit the supplies for the keratin which is so profusely formed in the disease.

OPHTHALMOLOGY.

In this Section Dr. EDRIDGE GREEN read a paper on the Quantitative Estimation of Defects of Colour Perception, in the course of which he said that before discussing the methods which should be employed to ascertain the degree of colour defect of a colour-blind person it was necessary to consider in detail the causes of colour-blindness. These may be ranged under four heads:—1. Colour defects due to absorption of certain rays by the media of the eye. 2. Colour defects due to non-excitability of the visual substance or optic nerve fibres by rays of light of a certain wavelength. 3 Colour defects due to pathological conditions. 4. Colour defects due to imperfection of the colour-perceiving centre. Each of the above subdivisions requires to be considered separately. On examining a case of colour-blindness, we must ascertain under which of the above heads the defects must be classed. We may meet with any one of the above conditions alone or combined, and it is this want of classification which has made the study of colour-blindness so difficult. An examination with the spectrum should first be made to ascertain the psycho-physical perception of the individual examined, and whether there is shortening of the spectrum for bright light or light of diminished intensity. In cases of defective psycho-physical perception, fewer colours or points of difference are seen in the spectrum. Special precautions being taken against error, the examinee is requested to mark out the various bands of colour. As the middle of the spectrum is shown before the two ends the examinee is obliged to be guided by its appearance to him. The smaller the number of colours seen in the spectrum the greater is the psycho-physical defect. If the normal sighted be designated hexachromic the five unit may be called pentachromic, the four unit tetrachromic, the three unit trichromic, and the two unit dichromic. In two unit cases of colour-blindness the size of the neutral band, if present, should be recorded, as the larger the neutral band the greater the psycho-physical defect. The degree of shortening may be represented quantitatively by giving the proportion which the shortened portion bears to the total amount of colour seen by the normal sighted. In order to ascertain quantitatively the degree of the defect in cases of colour-blindness due to absorption of certain rays by the media of the eye, we must first exclude colour-blindness due to defective psycho-physical perception and colour-blindness due to a shortened spectrum, and then test the individual with an apparatus for mixing spectral colours in definite proportions. The appearance of definite mixtures should be noted. A certain amount of blue being found to neutralise a definite amount of yellow for the examiner, it should be noted whether more or less blue is required for the examinee and the relative proportions of each colour. The yellow and blue must in every case correspond to definite points of the spectrum scale. The intensity of the colour may be regulated by increasing or diminishing the intensity of the source of light. In the same way the proportions of red and green necessary to make yellow and the proportions of green and violet necessary to make blue should be ascertained. The proportions of the different complementaries necessary to make white should be recorded. There is not much to be said about Class 3—namely, colour defects due to pathological conditions. These rarely exist apart from other diseases of the eye, and are fully considered in treatises on these diseases.

Mr. M. MCHARDY read a paper describing a new operation for the Maturation of Miniature Senile Cataract by Trituration, recently brought before the Ophthalmological Society. Messrs. Snell, Grossmann, and Eales approved of the method, Dr. Hill Griffith and M. Panas objecting to it except in a few special cases, the disadvantages being that it failed when the cataract had a hard nucleus, and required three sittings: (1) the iridectomy and trituration; (2) the extraction; (3) the operation to remove the secondary cataract (capsule). M. Panas advised the use of scissors for the entire removal of secondary cataract, rather condemning the use of the needle, owing to the laceration of the vitreous.

Mr. WRAY read a short paper on the good results obtained by Galvanism in Restoration of Vision in Amblyopic Squinting Eyes. In a discussion which followed, Messrs. Priestley Smith, Juler, and Story agreed that if corroborated the results were very important, but doubt was expressed whether the amblyopia was not imaginary, such being the commonest form at the age of the patient.

Dr. HILL GRIFFITH read a paper on the Diagnosis of Intra-ocular Growths, and exhibited a series of jelly preparations of eyes referred to in the paper. Mr. Eales discussed the relative advantages of the various anæsthetics in ophthalmic practice, the general conclusion being that cocaine was best for cataract cases; chloroform for glaucoma, as causing less congestion; and ether for other cases, as being safer, especially in prolonged operations.

OTOLOGY.

In a discussion on Mr. Arbuthnot Lane's paper on the Treatment of Chronic Middle-ear Disease, advocating mastoid trephining in suppurating cases, several of the speakers supported Mr. Lane's views, but the general opinion was that the operation was not to be recommended as generally necessary, but only advisable after failure of simpler treatment. Mr. W. H. Stewart spoke of the danger of forcible syringing by unskilled hands, and the indiscriminate use of

"ear lotions" and "drops"; for middle-ear suppuration he recommended irrigation with an intra-tympanic douche, followed in obstinate cases, especially if there was mastoid tenderness, by opening the mastoid antrum. Dr. Donald Stewart compared the values of the Eustachian catheterism and the use of Politzer's bag for inflation of the middle ear. He considered the latter the most generally successful method, but had found the catheter the better in a few cases.

A paper by Dr. Turnbull (Philadelphia), on Fracture and "Concussion" of the Temporal Bone as a Cause of Deafness, was read by the secretary. In a short discussion which followed, the opinion was that in the cases related a more probable explanation was the presence of some structural lesion of the mechanism of hearing.

LARYNGOLOGY.

In the discussion on the treatment of Laryngeal Tuberculosis, it was generally agreed that for all except the very advanced cases Krause's method of curetting and the local application of lactic acid and menthol were to be recommended. With reference to the treatment of spurs and deflections of the nasal septum, the speakers agreed that mere reposition with forceps by flexion or fracture was of little use, but that it was best to remove the projecting portion by the knife or a nasal trephine.

Mr. LENNOX BROWNE read a paper on Faucial and Pharyngeal Tenesmus due either to (1) hypertrophy of the lingual tonsil, (2) varix of the vessels at the base of the tongue, or (3) congestion of the thyroid gland. The causes were mainly over-use, or wrong use of the voice, often associated with a tendency to varicosity elsewhere. The best treatment was an application of the thermocautery, or in marked cases the removal of the hypertrophic tissues by a snare. Astringents and iodine had failed to produce any marked effect.

Dr. A. BRONNER read a paper on the relation of the Pharyngeal Tonsil to Disease of the Throat, Ear, and Nose; more attention had lately been paid to the latter; but the naso-pharynx was still too much neglected; he considered that in no case should cauterisation be applied in the nose, nor the faucial tonsils be removed until the naso-pharynx had been cleared of adenoid growths of the pharyngeal tonsil. The discussion which followed turned mainly upon the relative advantages of anæsthetics, most of the speakers differing from the author of the paper in considering them inadvisable.

Dr. JACOB (of Leeds) quoted cases of functional aphemia, which in some instances occurred in conjunction with functional aphonia. Laryngoscopical appearances were variable; in the majority there was a varying amount of adductor paralysis, but in one of his cases the crico-thyroid was chiefly affected.

Dr. WALKER DOWNIE gave an account of some unusually large nasal polypi, in some of which he had found it necessary to remove portions of the turbinated bones.

Dr. JOHN J. HARTNETT read a paper descriptive of his Broncho-pulmonary Insufflator, an improved inhaler, for which he claims as its advantage that the motor power is derived from the instrument, the patient being required to take an ordinary inspiration, and not to suck or draw the air through the tubes. The medicating chamber is capable of holding a sufficient quantity of fluid to last for days if required. Drugs, such as carbolic acid, creasote, &c., can be heated by the addition of a little hot water, and the volatilising power thereby considerably increased. By the two chambers it is possible to use at the same inhalation two medicaments which are not miscible, or to increase the volatilising power of one, while the other can be dropped on the sponge in the dry chamber. The air comes from the insufflator charged to the fullest extent with the volatile medicaments, but never in the form of steam, watery vapour, or spray. By using ammonia solution in the dry chamber and hydrochloric acid in the bottle, it makes a perfect ammonium chloride inhaler.

MEDICAL MAGISTRATES.—Mr. T. Pridgin Teale, M.B., F.R.C.S., and Mr. W. H. Ellis, M.R.C.S., L.S.A., have been placed on the Commission of the Peace for the West Riding of Yorkshire.—Mr. Henry Gray Croly, President of the Royal College of Surgeons in Ireland, of Merrion-square and Kilmacud House, Stillorgan, has been placed on the Commission of the Peace for the County of Dublin.

THE HEALTH OF THE ARMY IN 1888.

No. II.

THE strength of the British troops in India (exclusive of those on field service in Upper Burmah during the first quarter of the year) was 68,139; the admissions into hospital were 1387, the deaths 15·20, the constantly sick 72·34, the invalids sent to England 22·85, and those finally discharged 12·43 per 1000. These are all slightly higher than in the preceding year. In Bengal, in a force of 42,141, the admissions were 1403, the deaths 15·73, the mean sick 71·96, and the invaliding to England 20·62 per 1000; all, except the mean sick, under the decennial average. Omitting the small stations, the highest ratio of admissions was at Delhi, amounting to 2807 per 1000, chiefly from ague, and the lowest 642 per 1000 at Camp Gharial. The highest death-rate was at Murree, where 27 deaths occurred in a force of 265 men, or 101·89 per 1000; of these 16 were from cholera and 5 from enteric fever. The lowest death-rate was 2·88 in a force of 347 at Barrackpore; at Cherat, in the Peshawur Division, it was only 3·70 in a strength of 541. Small-pox prevailed to some extent at Lucknow, Mooltan, and Meerut. At the first there were 32 cases with 5 deaths in a strength of 2760; at Mooltan 10 cases and 1 death in 844 men; and at Meerut 8 cases and 1 death in a force of 2248. All the cases had been revaccinated. The admissions from enteric fever were 686 and the deaths 177, being respectively 16·3 and 4·20 per 1000 of strength. The stations at which it was most prevalent were Allahabad, Lucknow, Bareilly, Ranikhet, Meerut, Subathu, Rawal Pindi, and Quetta. The greatest number of cases and deaths occurred in the second quarter of the year; the proportion of deaths to cases was slightly over 1 in 4. At none of the stations could any special cause be traced; but at Lucknow the medical officer in charge states that "there is no reasonable doubt that impure milk and other drinks procured in the bazaars and surrounding villages were a source of much of the disease." Cholera did not prevail to any great extent, except at Rawal Pindi, Murree, and Camp Gharial. At the first of these there were 57 cases and 36 deaths in a force of 2701; at the second, 28 cases and 16 deaths among 265 men; and in the third, 15 cases with 11 deaths in 439. The great prevalence and mortality occurred in July, August, and September. Sixty per cent. of the cases proved fatal. Venereal diseases gave rise to 361 admissions and a constant inefficiency of 24·96 per 1000 of strength. Seven deaths are recorded under the head of alcoholic poisoning, 3 of which occurred out of hospital. Under the class of injuries 108 deaths appear, of which 1 was in action, 19 were suicidal, and the rest accidental; the latter include 35 from heat apoplexy, 8 from sunstroke, and 12 by drowning. One man died at Dinapore from a gunshot wound inflicted by a comrade, who was hanged for the crime. Of 1160 officers, 29 died and 53 were invalided to England, being respectively 25·00 and 45·69 per 1000, both higher than among the troops. Eight of the deaths were from enteric fever and 5 from cholera, 1 from gunshot wound in action, and 2 from self-inflicted wounds; the principal causes of invaliding were fevers and debility. Among the women the admissions were 764 and the deaths 22·03 per 1000; of the latter, one-third were caused by cholera. The children furnished 459 cases and 54·63 deaths per 1000.

The force in the Madras command was 14,073, and the admissions into hospital were in the ratio of 1350, the deaths of 16·13, the mean sick of 76·81, and the invalided to England of 27·85 per 1000. The admissions and deaths were considerably higher than in 1887, but this was entirely due to the returns from Upper Burmah being for the first time included for the last nine months of the year. The annual ratio of admissions into hospital in Upper Burmah for the nine months April–December, the period for which they are included in the general return, was 2367, and of deaths 48·49 per 1000. The admissions in the rest of the force were 1195 and the deaths 10·64 per 1000, both lower than in the preceding year. Enteric fever was the cause of 104 admissions and 32 deaths, being respectively in the ratio of 7·4 and 2·27 per 1000. The only stations at which it prevailed to a great extent were Secunderabad and Bangalore. At the former the admissions were 14·8 and the deaths 5·04,

and at the latter 15·8 and 4·52 per 1000 of strength. Upwards of half the cases occurred in the third quarter of the year, and nearly one in three proved fatal. It is noteworthy that in Upper Burmah only 3·8 cases and 1·62 deaths per 1000 occurred. "The administrative medical officer reports that the cause was in no instance traceable, and he adds that the general freedom from enteric fever throughout the country is most remarkable, considering its insanitary condition; indeed, sanitation may be said to be practically non-existent." There were 54 cases and 40 deaths of cholera in the command, being in the ratio of 3·9 and 2·84 per 1000, but all except two, of which one proved fatal, occurred in Burmah. In Upper Burmah the cases amounted to 25·9 and the deaths to 19·94 per 1000 of strength. The cases, however, are understated, as 5 deaths on the march have not been entered among the admissions. These would raise the ratio to 28·6 per 1000; four-fifths of the cases occurred in the second quarter of the year. There was a marked increase in malarial fevers, but this also was due to Upper Burmah, where the admissions for this class amounted to 961 per 1000. Venereal diseases were the cause of 359 admissions and a constant inefficiency of 26·41 per 1000 of strength, being almost identical with the results of the preceding year. In the class of injuries 33 deaths appear, of which 2 were from wounds received in action; of the others, 9 were by heat apoplexy and 3 by sunstroke, 3 were suicidal and 7 by accidental drowning. Of 365 officers, 6 died and 40 were invalided to England, being in the ratio of 16·44 and 109·4 respectively. Of the deaths, 1 was from gunshot wound received in action, 1 from snake bite, 2 from hepatitis, 1 from cholera, and 1 from enteric fever at Bellary. The death-rate of the women was 13·05 per 1000. There were 3 deaths from tubercular phthisis, 1 from cancer, and 1 from hydrophobia at St. Thomas's Mount. In an average strength of 1627 children there were 70 deaths, or 43·02 per 1000. One of the deaths among them also was from hydrophobia.

The average strength of European troops in Bombay was 11,925. The admissions were 1371, the deaths 12·24, the mean sick 68·43, and the invalids sent to England 24·82 per 1000; the admissions and mean sick being higher and the deaths and invaliding lower than in 1887, and all except the mean sick considerably under the decennial average. The highest ratio of admissions was at Satara and the lowest at Deesa, and at neither of these did a death occur; the highest ratio of deaths was at Ahmedabad, chiefly due to enteric fever. There were 137 cases of enteric fever and 48 deaths, being 11·5 and 4·02 per 1000. The stations at which it was most prevalent and fatal were Ahmedabad, Poona, Ahmednagar, Nasirabad, and Neemuch. At none of these could any special cause for the disease be traced, but the principal medical officer remarks that "at Poona there has been great reason to complain of the inadequacy of the conservancy arrangements as carried out by the municipality, and possibly the greater prevalence of enteric fever may have been influenced by the defective sanitation, but elsewhere there have not been any such defects to notice." Bombay was remarkably free from cholera among the troops, only 10 cases and 7 deaths having been reported. Of these, 7, including 5 of the fatal cases, occurred at Poona where the disease was prevalent in the city and surrounding country. All the cases were admitted in the first half of August. At Ahmedabad, although a severe epidemic prevailed among the civil population for some months, there was only one fatal case among the British troops. The admission rate for all forms of venereal disease was 345 and the constant inefficiency 23·48 per 1000, both above the average. In the class of injuries, of a total of 24 deaths there were 9 from heat apoplexy, 3 from sunstroke, 6 from gunshot (of which 5 were suicidal), and 2 by accidental drowning. The strength of the officers was 375, of whom 6 died and 16 were invalided to England, or 16·0 and 42·7 per 1000; 2 of the deaths were from smallpox, 2 from accidental drowning, and 1 from fracture of the base of the skull, the result of a fall; the other death was from enteric fever. The death-rate among 564 women was 30·14 per 1000, and among 1075 children it was 60·46.

The relative sickness, mortality, and invaliding by arms of the service in India during the year were as follows:—Admissions per 1000 of mean strength: Cavalry 1320, Royal Artillery 1471, Infantry 1410. Deaths in India, exclusive of depôts, garrison staff and departments, and troops on the march: Cavalry 15·76, Royal Artillery 16·46, Infantry 14·26. Invalids sent home: Cavalry 16·70, Royal Artillery 23·61, and Infantry 21·85. It would appear, therefore, that the Artillery furnish the highest proportion of admissions, deaths, and invalids; the Cavalry the lowest of admissions and invalids; and the Infantry the lowest death-rate.

The average strength of British troops employed in Egypt was 3346. The admissions into hospital were in the ratio of 1024, the deaths of 14·64, the mean sick of 64·58, and the invaliding of 22·41 per 1000. The principal stations occupied were Cairo and Alexandria, the average strength at the former being 2183 and at the latter 1061; the admissions at each closely corresponded, but the death-rate at Cairo was highest, amounting to 16·4 per 1000 as against 9·4 at Alexandria. There were 14 cases of small-pox, with 4 deaths, all at Cairo. Enteric fever caused 96 admissions and 20 deaths, being 28·7 and 5·98 per 1000 of strength, both slightly under the amount in the preceding year. Its prevalence and mortality were nearly identical at Alexandria and Cairo. It is stated that "the death-rate of the civil population in Egypt is very high, but enteric fever does not appear to be at all common among the civil community, a fact which has its parallel in India and elsewhere." Dysentery gave rise to 50 admissions and 2·39 deaths per 1000. It was nearly twice as prevalent at Alexandria as at Cairo. The principal medical officer reported that the treatment by sulphate of magnesia was found to be the most efficient, combined with milk diet and bland fluids, such as barley water. The admissions by all classes of venereal diseases amounted to 265 and the constant inefficiency to 18·52 per 1000. There were only 3 deaths from injuries: 1 resulting from falling from a window, 1 from rupture of viscera (the man having fallen off a transport waggon), and 1 fracture of skull from a fall from a horse. One officer died of diphtheria, and 2 women died, one of enteric fever and the other of nephritis. Of 195 children, 21 died, or 107·7 per 1000; diarrhœa, teething, and debility being the most frequent causes of death. The principal medical officer states that, notwithstanding all efforts to keep and maintain the barracks in "a wholesome and salubrious state, the cities of Cairo and Alexandria in which the troops are stationed are very insanitary places, and their inhabitants very unhealthy. In the year 1887, for example, the death-rate in London was 19·5 per 1000, whereas in Cairo it was 46·8, an excess of 27·3 per 1000. At Alexandria the mortality was 43 per 1000 for the same year. The mortality in Cairo is about 15·7 per 1000 over that of the most unhealthy European town." Dr. Marston suggests quartering the troops in the upper and best rooms of the barracks at Abassiyeh, which are structurally excellent, and capable of affording ample accommodation.

The health of the troops on board ship appears to have been satisfactory, with the exception that 6 deaths, or 5·22 per 1000 of strength, occurred from pneumonia on the passage out, and that venereal diseases were very prevalent. Among troops proceeding on foreign service they gave an annual ratio of 599, among those returning home from abroad 445, and among those proceeding from one station abroad to another 486 per 1000; but it must be remembered that these annual ratios are calculated from observations extending over short periods of time.

ARMY MEDICAL SCHOOL, NETLEY.

THE summer session of the Army Medical School was brought to a close on Thursday, the 31st ult., when the positions taken by the surgeons on probation of the British and Indian Medical Services were announced, and the ceremony of distributing the prizes gained in the final examination took place. Ten surgeons on probation of the Medical Staff and seventeen of the Indian Medical Service had gone through the courses of instruction. The session had also been attended by a non-commissioned officer of the Medical Staff Corps, first-class Staff-Sergeant Fredk. Smith, who had been specially nominated by the Right Hon. the Secretary of State for War, at the recommendation of the King and Queen's College of Physicians and Royal College of Surgeons, Ireland, of which Colleges Sergeant Smith was a licentiate. A medical officer of the Imperial Japanese Service, Surgeon Yamomoto, had also, by permission of H.M.'s Government, attended the lectures and gone through the practical work of the School during the session.

Dr. W. M. ORD, of St. Thomas's Hospital, distributed the

prizes and delivered an address to the surgeons about to receive commissions in the two public services. He was accompanied by Mrs. Ord; by Surgeon-General Sir J. Fayrer, K.C.S.I., F.R.S., Physician to the Secretary of State for India in Council; Surgeon-General Sir J. H. Ker-Innes, K.C.B., Q.H.S.; the Rev. Robert Whiston, and others. Director-General W. A. Mackinnon, C.B., was prevented by official business from leaving London. The military and medical staff of the Royal Victoria Hospital, the professors of the Army Medical School, and a large number of visitors, including many ladies, assembled in the lecture theatre of the Royal Victoria Hospital. Here, after the arrival of the visitors from London about noon, the usual official correspondence on the results of the session, together with the lists of the surgeons on probation as finally arranged, were read, and the names of the surgeons who had gained prizes or other marks of distinction announced. The lists and names of prizemen are printed elsewhere.

Dr. ORD, after handing the prizes with a few appropriate observations to each recipient, then delivered his address, the chief topic of it being the proper relations between medical attendants and their patients whether in military or in civil life. Dr. Ord was followed by Sir J. Fayrer, who referred principally to the Indian Medical Service, and showed by numerous illustrations its great advantages as a field of professional practice, and the vast variety of openings afforded by it to diligent students in all departments of science. Sir J. Fayrer incidentally remarked that the danger of separation of the Indian Medical Service from Netley, which had been threatened for the last year or two, had passed away for the present. He mentioned that he was one of those who held firmly the conviction that the connexion with Netley was of paramount importance for ensuring the best interests, as well as for advancing the efficiency, of the medical department in England and in India; and he confidently looked to those who were now leaving Netley, and shortly going to India, to maintain that his conviction was a just one. After other observations, Sir Joseph concluded by congratulating Mr. Fred. Smith, who, though not gazetted, was no longer a non-commissioned officer—on the special merits he had displayed during the past session. He trusted that his example would serve as an honourable incentive to others of his corps, who, probably remembering that in the French army it had been said that every French soldier carried a *lectle* hackneyed marshal's bâton in his knapsack, might henceforth say that every non-commissioned officer of the Medical Staff Corps carried with him the emblem of office of an Army Medical officer, however high might be his grade.

After a few concluding proceedings, the large party of ladies and gentlemen present adjourned to the spacious mess-room in the officers' quarters, where they were entertained at luncheon.

ARMY VETERINARY DEPARTMENT.

THE ANNUAL STATISTICAL AND GENERAL REPORT FOR THE YEAR ENDING DEC. 31ST, 1889.

THE report of the Principal Veterinary Surgeon shows the average strength of the army horses in the United Kingdom to have been 13,091, the admissions to treatment 7693, the deaths 308, the number cast 1398, and constantly under treatment 496·4. These figures give the ratios of 588 cases, 23·53 deaths, 106·8 cast, and 37·9 constantly sick, per 1000 of strength. The admissions were 10 per 1000 lower, but the deaths, castings, and mean sick were higher than in 1888. The highest proportion of cases occurred in the Royal Horse Artillery and the Army Remount Department, and of deaths in the Heavy Cavalry. The infantry transport, in a strength of 147, had no death. Surgical diseases and accidents were much the most frequent cause of admissions, followed by diseases of the locomotory apparatus and of the respiratory organs. The last gave the highest proportion of deaths, amounting to 5·58 per 1000. Diseases of the locomotory apparatus and those of the digestive organs were next in order. Of 56 deaths in the locomotory class 52 were returned in the column of "destroyed," and of these, 32 were in consequence of fracture; 6 more appear under that head in the class of accidents as destroyed, and 5 in the column "died," making a total loss of 43 from fractures. Not a single case of glanders or farcy occurred during the year.

In the class of zymotic diseases there were 362 admissions for strangles, 125 for epizootic fever, and 80 for influenza; their greatest prevalence was in the 2nd Life Guards in Regent's-park Barracks, where the ratio amounted to 400 per 1000; in Leeds it was 140, in Dublin 121, and in Hyde Park Barracks 103 per 1000. There were 223 cases under treatment for laryngismus paralyticus (roaring), with the result of 7 cured, 103 relieved, 14 destroyed, 86 returned as incurable, and 13 remaining in hospital. In the return of "cast and sold," 199 appear under this head. On this subject Dr. Fleming says: "Of those reported cured and relieved, a number have undergone the summer drills of last year, and performed long marches, while others which were cast and sold—some for causes other than roaring—realised a much larger average price than usual. As a detailed statement of the results of surgical treatment for this condition would occupy too much space here, a special report on the subject is being prepared." We cannot but regret that Dr. Fleming did not publish before his retirement from the service a complete official statistical summary of the results of his operations for this disability. We trust that he will use every means in his power to have a careful numerical analysis of the cases prepared and published. The most frequent causes assigned for casting were old age, for which 383 horses were sold, being 29·3 per 1000 of strength; roaring 199; physically unfit 192; and prematurely worn out 114. The average price obtained for the animals cast and sold was £14 2*s.* 2*d.*, and the average length of their service had been about seven years and a half. There were 238 mules employed, of which 101 came under treatment; none died, and ten were cast. Of the cases, 48 were diseases or injuries of the locomotory apparatus and 47 surgical diseases and accidents. Dr. Fleming has again called attention to the risks attending the purchase of remounts at too early an age. "I may be allowed to repeat that there would be much less mortality and undoubtedly less casting, while horses could be retained longer in the service if they were excluded from the ranks till they were at least five years old. Until they have attained that age they should not be considered effective. ..... The presence of so many immature horses in regiments is also a source of embarrassment and expense, as they require so much attention, medical and otherwise, and hamper troops in their movements."

The average strength of the horses employed in Egypt was 329, and of mules 174. Of the former, the cases of disease and injury were 778 and the deaths 79·03, and of the latter 471 and 5·75 per 1000 of strength. Of the 26 death of horses, 8 were from diseases of the digestive apparatus, and of these 6 were returned as scrotal hernia; 6 were destroyed on account of glanders and farcy, 6 for injuries of the locomotory apparatus, 4 died of pulmonary disease, 1 of syncope, and 1 was destroyed on account of lymphangitis. The only death among the mules was from metritis.

In Natal the strength of horses and mules, the details of which are not stated separately, was 661; the admissions were 480, the total deaths 23, and the cast and sold 44, exclusive of 61 of the Mounted Infantry on reduction of establishment. These give the proportions of 726 cases, 34·80 deaths, and 66·57 cast and sold per 1000 of strength. There was only one fatal case of horse sickness returned under the head of "fever specific," but there were 7 fatal cases of anthrax. No remark is made regarding these, and it is possible that, as pointed out by Mr. Nunn in the Report for 1888, cases of "horse sickness" may still be returned under this head. Five deaths were from diseases of the respiratory, and 6 from those of the digestive organs. It is worthy of note that no death was recorded under the class of locomotory apparatus, and only 1, from fracture of vertebræ, under surgical diseases and accidents.

The army veterinary school at Aldershot continues to do good work. During the year 112 officers attended, of whom 107 received certificates. At the two courses for farriers and shoeing smiths and "cold shoers" 132 attended, of whom 128 were examined, and 118 passed. "The number of men at present in the ranks competent to shoe is 586. There are also under instruction as 'cold shoers' 166 men."

The arrangement noticed in last year's report for obtaining a supply of animal vaccine for the army has been carried out successfully. The amount of lymph procured

was sufficient to vaccinate nearly 36,000 persons. It has been sent to the military stations at home and abroad, and the results are stated to have been very satisfactory. Dr. Fleming gives Professor Smith of the Aldershot veterinary school due praise for the marked care and intelligence with which this work has been done under his supervision.

Dr. Fleming has now retired from the Service on the completion of the period laid down for tenure of office as principal veterinary surgeon. In addition to much good work he has done, he is entitled to great credit for having introduced the system of annual reports on the health of the army horses, and for the clear and satisfactory statements contained in those which he has prepared.

THE BRITISH OPHTHALMIC HOSPITAL AT JERUSALEM.

THE sixth annual report of the British Ophthalmic Hospital at Jerusalem, which is maintained by the Order of St. John of Jerusalem in England, has just been issued to the members and associates of the Order, and contains a very gratifying record of good work, in the way both of philanthropy and of surgery. When first established, the hospital had to encounter great difficulties, for, although diseases of the eye are numerous and destructive in and about Jerusalem, the inhabitants had come to associate the charitable efforts of Europeans with a desire to proselytise, and were suspicious of these efforts accordingly. Such suspicions, however, have been gradually dispelled by experience, and the hospital is now freely resorted to by Christians, Jews, and Mahometans alike. His Imperial Majesty the Sultan has been a liberal patron, having given T£900 towards the expenses of the site, besides granting firmans by which the rights and property of the Order are abundantly secured; and the Pasha of Jerusalem has also taken warm interest in the success of the institution. One bed is entirely supported by the Greek Patriarch, and another by the Anglican bishop of Jerusalem; while the chief Rabbi has also been a contributor, and has borne grateful testimony to the benefits conferred upon his people. Since April, 1888, the hospital has been under the medical charge of Dr. Cant, F.R.C.S., who succeeded Dr. Ogilvie, and in whose hands the repute of the institution has been steadily increasing. The report just published contains Dr. Cant's account of his work for the year 1889, and it appears from this that he has indeed had no sinecure. Two hundred and forty new patients were admitted to the twenty beds of the hospital during the year, 2833 new cases were admitted as out-patients, 7383 attendances were given to out-patients, and 266 major and 58 minor operations were performed. Among the operations there were 25 cases of cataract extraction, 63 for artificial pupil, and no less than 137 for trichiasis. Dr. Cant reports that the last-named affection, left behind by some of the severe forms of conjunctivitis so common in the East, is not only very frequent, but also a source of great suffering and of complete disablement from work; and his large experience in operative measures for its relief has enabled him to restore the great majority of the patients to vision and comfort. As compared with the last six months of the previous year, the number of new applicants from July to December of 1889 showed an increase of 400; and, although the numbers were chiefly made up by Arabs, Fellaheen, and Jews, no less than nineteen other nationalities are mentioned in the report. Mr. J. M. Cook, the tourist's friend, takes a warm interest in the hospital, and has aided it, both with money and influence, in various ways; and the account of his visits to it, as well as of the visits of Sir Edmund and Lady Lechmere, bear a warm tribute not only to the success of Dr. Cant's able management, but also to the untiring and self-sacrificing manner in which Mrs. Cant has seconded her husband's efforts. The British consul, Mr. Noel Temple Moore, writes that "to Mrs. Cant's unremitting care and personal exertions are due the admirable order, neatness, and brightness of the hospital"; and there seems to be a general consensus of opinion on the part of those who have had opportunities of observation that this outpost of British science and philanthropy is doing a great work, not only within its proper limits, but also in the direction of showing the real tendencies of civilisation and of Christianity. The maintenance of the hospital has hitherto been a severe tax upon the resources of the Order of St. John, and has only been rendered possible by the munificence of a few of the members; but it has now become an institution which has a distinct claim upon the national sympathies, and which ought no longer to be permitted to struggle for existence.

NEW SYDENHAM SOCIETY.

AT the thirty-second annual meeting of this Society, held in Birmingham, July 31st, 1890, a draft of the report was read and approved and ordered to be printed as usual. The Council had pleasure in being able to state that the year had been one of increased success. The Society's income has exceeded that of the preceding year by more than £800. The balance-sheet showed that the sum of £354 2*s*. 4*d*. was carried over to the present year. Notwithstanding the liberal issue of five volumes for the year a slightly better balance had been carried over. This result had been obtained partly by subscriptions for past years and the sale of back volumes, but chiefly by the accession of new members. The volumes which comprised the series for 1889 were the following:—

The seventh Fasciculus of the Atlas of Pathology, comprising Diseases of the Gall-bladder, Calculi, &c., with one plate illustrating Osteitis Deformans. The third volume of Charcot's Clinical Lectures on Diseases of the Nervous System; translated by Dr. Savill. The second volume of Cohnheim's Lectures on General Pathology; translated by Dr. A. McKee. The sixteenth part of the Lexicon of Medical Terms: "Lin." to "Mas." The second and concluding volume of Henoch's Lectures on Diseases of Children, with full Index to both vols; translated by Dr. Thomson. For the current year, 1890, one volume—Flügge's Treatise on Micro-parasites, translated by Mr. Watson Cheyne, is already in the hands of members. A second, the third and concluding, volume of Cohnheim's Lectures on General Pathology, with Index to the three volumes, is now ready for issue. The series for 1890 will probably be concluded by—A Fasciculus of the Lexicon (seventeenth); and a Fasciculus of the Atlas of Pathology. The latter will commence the subject of "Diseases of the Brain and Spinal Cord."

Amongst other works which the Council has in preparation, are—

Selections from the Works of Professor Alfred Fournier. Selected Essays and Lectures from French and German sources. For the forthcoming volume the following are in preparation: Dr. Pierre Marie's papers on Acromegaly (with abstracts of more recent papers on the same subject). Professor Billroth on the Influence of Vegetable and Animal Cells upon each other. Dr. Unna's (of Hamburg) papers on the Treatment of Diseases of the Skin. The Lexicon of Medical Terms and the Atlas of Illustrations of Pathology will be proceeded with as regularly as may be found practicable.

The library of the Toronto University having been destroyed by fire, the Council had deemed it right to present to the University as complete a set of the Society's works as can now be made up. Sir James Paget was re-elected President, Dr. W. Sedgwick Saunders treasurer, and Mr. Jonathan Hutchinson, hon. secretary. A vote of thanks to the retiring officers and to the local secretaries for their services during the year was proposed and carried unanimously.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Cardiff Port District.—In reporting on the port of Cardiff for 1889, Dr. Ed. Walford gives a full account of the methods of procedure adopted by him and by his staff to secure the regular and systematic inspection of shipping under the varying circumstances that are met with. The total number of vessels entering the port during the year was 13,750, and 33 patients were admitted into the hospital ship. As the result of the inspections made, ninety-seven notices were served on the masters of vessels. Of these, eighty-five were forthwith complied with, and it is satisfactory to note that all the others were also complied with at other ports before the vessels returned to Cardiff. Full details of all this work are included in the report.

Liverpool Urban District.—Liverpool now contains a population of 606,562, and deducting the area of the docks, the density of the city amounts to 135 per acre. The

general death-rate, which for a number of years past has been almost continuously undergoing diminution, was 21·5 per 1000 during 1889. Zymotic diseases were more numerous than in the previous year, and the comparatively small amount of hospital accommodation which the Corporation have provided, and which has all along been regarded as a commencement only of that which is needed, was quite insufficient for the requirements of the borough. This is a matter which has more than once called for remonstrance by Dr. Stopford Taylor. Amongst the fever deaths, there were 45 from typhus. As many as 158 cases of this disease were notified, and of these 124 were removed to hospital. Diphtheria caused 57 deaths; but in addition to this there were no less than 129 fatal attacks of croup, which is described as non-spasmodic. With regard to the several causes of death, very elaborate tables are compiled, showing their incidence on age and also on the different localities comprised within the city. During the year Dr. Stopford Taylor made a report to the effect that a large number of houses were unfit for human habitation and ought to be demolished, and it is satisfactory to note that the grand jury expressed their unanimous approval of the report, and made a presentment accordingly. The area includes a number of streets and courts largely made up of back-to-back houses and places in which ventilation was impossible; the neighbourhood had also long been known as one of the hotbeds of typhus. Copious details as to general sanitary administration are included in the report, and it is stated that out of a total of 6028 cases of infectious diseases that came under notice, 1164 were isolated in hospital.

Romford Rural District.—Infectious diseases were fortunately not very prevalent in the district during 1889. Diphtheria, however, caused some anxiety, and Mr. Alfred Wright urges that the somewhat especial incidence of this disease on Ilford is due to the escape of sewer air from the sewers in that portion of the district. He advocates the substitution of ventilators by means of shafts and lamp-posts instead of the open street ventilators. This is a subject which, almost more than any other, needs putting to a practical test, with a view of ascertaining how far efficiency of ventilation can be best secured by one or other of the many alternative systems that have been advocated. Each of the constituent portions of the district is more or less separately dealt with, and a full account is given of the infectious diseases, of the sanitary conditions with which they were associated, and of the proceedings taken and advice given during the year. The general death-rate was low, reaching only 11·7 per 1000 on a population estimated at 23,710.

Basford Rural District.—Dr. Boobbyer, who now holds office for the borough of Nottingham, joins his successor, Dr. J. S. Tew, in reporting on the Basford district for 1889, when the general death-rate was 15·6, and the zymotic rate 1·96 per 1000. Enteric fever was unusually prevalent during the year. It caused twenty-six deaths, and it is stated to have been exceptionally prevalent both throughout Nottinghamshire and the East Riding of York. But one remarkable indication of a means for securing its diminution is recorded from Basford itself, for in the populous area of Kirby and Annesley parishes there has been a remarkable absence of the disease since a constant service of good water has been available; whereas prior to this period, and whilst polluted water was in use, epidemics of this fever were constantly recurring in the neighbourhood of Kirby. The adoption of the Notification Act brings into prominence the need for suitable means of isolation in hospital, and this point is urged upon the sanitary authority. So also, for the purpose of preventing the spread of infectious diseases, the attention of the authority is urgently directed to the necessity of having a code to regulate dairies and cowsheds, and an inspector to supervise them.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5574 births and 3649 deaths were registered during the week ending Aug. 2nd. The annual rate of mortality in these towns, which had been 18·0 and 17·6 per 1000 in the preceding four weeks, rose again last week to 19·6. The rate was 19·8 in London and 19·4 in the twenty-seven provincial towns. During the first five weeks of the current quarter the death-rate in the twenty-eight towns averaged 18·1 per 1000, and was 2·4 below the mean rate in the corresponding periods of the ten years 1880–89. The lowest rates in these towns last week were 9·8 in Cardiff, 12·2 in Brighton, 13·6 in Nottingham, and 14·4 in Bristol. The rates in the other towns ranged upwards to 22·5 in Plymouth, 24·3 in Salford, 25·3 in Newcastle-upon-Tyne, and 26·1 in Manchester. The deaths referred to the principal zymotic diseases, which had been 526 and 561 in the preceding two weeks, further rose last week to 728; they included 343 from diarrhœa, 149 from measles, 77 from scarlet fever, 72 from whooping-cough, 52 from diphtheria, 35 from "fever" (principally enteric), and not one from small-pox. The lowest death-rates from these diseases were recorded in Wolverhampton, Brighton, Bristol, and Huddersfield, and the highest rates in Salford, Manchester, Leicester, and Preston. The greatest mortality from measles occurred in Manchester, Birmingham, Plymouth, and Bradford; from scarlet fever in Liverpool, Manchester, Salford, Halifax, and Sheffield; from whooping-cough and from "fever" in Plymouth; and from diarrhœa in Derby, Norwich, Preston, and Leicester. The 52 deaths from diphtheria included 36 in London, 6 in Manchester, and 5 in Salford. No death from small-pox was registered in any of the twenty-eight towns. No small-pox patients were under treatment in the Metropolitan Asylum Hospitals at the end of the week, and only one in the Highgate Small-pox Hospital. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospitals at the end of last week was 1505, against numbers increasing from 1067 to 1439 on the preceding ten Saturdays; the new cases admitted during the week were 168, against 159 and 135 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined in the preceding four weeks from 244 to 185, rose again to 215 last week, and exceeded the corrected average by 24. The causes of 64, or 1·8 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leicester, Nottingham, Oldham, Bradford, and in five other smaller towns. The largest proportions of uncertified deaths were recorded in Bristol, Liverpool, Preston, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·3 and 21·1 per 1000 in the preceding two weeks, declined again to 19·2 in the week ending Aug. 2nd, and was 0·4 below the rate which prevailed during the same period in the twenty-eight English towns. The rates in the eight Scotch towns ranged from 15·3 in Edinburgh and 17·0 in Greenock to 22·0 in Glasgow and 28·1 in Perth. The 498 deaths in the eight towns showed a decline of 47 from the number in the preceding week, and included 36 which were referred to whooping-cough, 24 to diarrhœa, 18 to measles, 7 to scarlet fever, 3 to diphtheria, 2 to "fever," and not one to small-pox. In all, 90 deaths resulted from these principal zymotic diseases, against 79 and 89 in the preceding two weeks. These deaths were equal to an annual rate of 3·5 per 1000, which was slightly below the mean rate last week from the same diseases in the twenty-eight English towns. The highest death-rates from these diseases were 5·3 in Dundee and 10·9 in Perth. The fatal cases of whooping-cough, which had been 31 and 36 in the preceding two weeks, were again 36 last week, of which 12 occurred in Glasgow, 8 in Edinburgh, and 6 in Aberdeen. The 24 deaths from diarrhœa showed a further increase upon those recorded in recent weeks, and included 10 in Dundee and 8 in Glasgow. The fatal cases of measles, which had been 27 and 25 in the previous two weeks, further declined to 18 last week, of which 11 occurred in Glasgow. The 7 deaths from scarlet fever included 3 in Edinburgh, and 2 deaths from diphtheria occurred in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 76 and 79 in the preceding two weeks, were last week 77, and exceeded the number in the corresponding week of last year by 17. The causes of 49, or nearly 10 per cent., of the deaths in the eight towns were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 20·7 per 1000 in each of the preceding two weeks, declined to 17·4 during the week ending August 2nd. During the first

five weeks of the current quarter the death-rate in the city averaged 20·6 per 1000, the rate for the same period being 17·9 in London and 16·9 in Edinburgh. The 118 deaths in Dublin showed a decline of 22 from the number in the previous week; they included 5 which were referred to measles, 3 to diarrhœa, 2 to whooping-cough, 2 to "fever," and not one either to small-pox, scarlet fever, or diphtheria. Thus the deaths from the principal zymotic diseases, which had declined in the preceding three weeks from 13 to 9, rose again to 12 last week; they were equal to an annual rate of 1·8 per 1000, the rate from the same diseases being 4·4 in London and 2·5 in Edinburgh. The fatal cases of measles, which had been 5 and 2 in the preceding two weeks, rose again to 5 last week. The deaths referred to whooping-cough, which had been 3 and 4 in the previous two weeks, declined again last week to 2; the mortality from "fever" and from diarrhœa slightly exceeded that recorded in the preceding week. The deaths both of infants and of elderly persons showed a slight increase upon the numbers of the previous week. Two inquest cases and 3 deaths from violence were registered during the week; and 38, or nearly a third, of the deaths occurred in public institutions. The causes of 11, or more than 9 per cent., of the deaths were not certified.

HEALTH OF DUBLIN: JUNE QUARTER.

The births numbered 2524, or 28·6 per 1000; and the deaths, 2081, or 23·6. Zymotic diseases caused 204 deaths, being 108 below the average for the June quarter of the ten years 1880–89. Whooping-cough caused 42 deaths, fever 40, measles 24, influenza 11, as contrasted with 61 deaths in the preceding quarter. Only 2 deaths from scarlatina were recorded.

THE SERVICES.

ADMIRALTY. — The following appointment has been made:—Surgeon Alexander F. Harper to the *Asia* (dated July 21st, 1890).

VOLUNTEER CORPS.—*Rifle:* 1st Dumbartonshire: Acting Surgeon J. McLachlan, M.B., to be Surgeon (dated Aug. 2nd, 1890).—13th Middlesex (Queen's Westminster): Acting Surgeon A. J. McD. Bentley, M.D., to be Surgeon (dated Aug. 2nd, 1890).

Correspondence.

"Audi alteram partem."

DOES "DIPHTHERIA" INCLUDE "MEMBRANOUS CROUP"?

To the Editors of THE LANCET.

SIRS,—I am afraid no definite or satisfactory answer can be given to Dr. Donkin's timely query, because "the scientific points on which it should be based are still unsettled." The reply of the Local Government Board simply leaves the matter where it was; but it is useful as an indication that no practical help need be looked for in that quarter. The Infectious Disease (Notification) Act mentions diphtheria *and* membranous croup amongst the diseases to be notified. The framers of the Act may therefore be presumed to have had some definite ideas as regards the infectious nature of the latter disease, even if they had none as regards its relation to diphtheria. Even if one admitted the identity of the two conditions there would still remain the difficulties of diagnosis. As the result of considerable experience I venture to submit the following classification as indicating some of these difficulties, and the urgent necessity for some revision of existing regulations in regard to the admission of diphtheria cases to the Asylum Board Hospitals:—1. Cases associated with measles: (*a*) Cases of more or less urgent laryngeal dyspnœa *before* the rash appears. I have admitted such cases into the East London Children's Hospital, and they have been sent in by members of the staff with a view to tracheotomy. They may or may not have coryza; but in my experience the urgent symptoms subside under treatment or with the appearance of the rash. What are such cases? Catarrhal laryngitis, surely. (*b*) Laryngeal dyspnœa coming on at a later stage of measles. Such cases are, I believe, always membranous. Are they also diphtheritic? Personally I should consider them so. 2. Cases associated with scarlet fever: (*a*) Children who when first seen are suffering from apparently typical pharyngeal diphtheria, but who develop a scarlet fever rash in a day or so; other members of the family presenting themselves subsequently with well-marked scarlet fever *or* diphtheria. (*b*) Cases in which at a later stage of scarlet fever membrane develops in the pharynx, or laryngeal symptoms occur. The latter symptoms are, I believe, nearly always due to a membranous laryngitis. Are these cases also diphtheritic? If so, are they to be placed with patients who may have diphtheria, but who have shown no signs of scarlet fever? 3. Cases of laryngeal dyspnœa more or less urgent, but without obvious naso-pharyngeal signs suggestive of diphtheria, and without any marked swelling of the cervical glands, and with an absence, or with a trace only, of albumen in the urine. Such cases may either be "membranous croup" or "catarrhal laryngitis." They can seldom be differentiated before operation or death. The former disease, according to some, is always diphtheritic, while, as Dr. Donkin observes, many competent authorities recognise a non-contagious variety. Without expressing an opinion on this point it is evident that cases of simple laryngitis should not be treated in the same wards with cases of diphtheria. In my experience "membranous croup" seldom recovers without operation, and I would suggest that those who maintain its identity with diphtheria are, at any rate, very frequently right, and they always pursue a *safer* course than those who hold the opposite view. My note-books contain many cases in support of the above rough classification. It refers to children only. Pending the formulation of something more helpful and practical than the Local Government Board's latest dictum, practitioners will continue to act according to their lights and beliefs. And, in solving disputed scientific points, may be that the social position of patients and the question of notification fees will become more or less important factors in helping them to a decision. I think, Sirs, you would be astonished if you were to inspect the notification records to find how prevalent "erysipelas" has become in the practice of some medical men. And it would equally rejoice you to find that "puerperal fever" is practically non-existent. The Notification Act is necessarily imperfect, but its aims are in the right direction, and I venture to traverse your dictum *re* multiple notification, and suggest that we may well strive to comply with the spirit rather than the letter of the Act. I am, Sirs, yours truly,

J. SCOTT BATTAMS,
Late Resident Medical Officer to the East London Hospital for Children and the Royal Free Hospital, &c.
Lavender-hill, S.W., July 29th, 1890.

"INCREASE OF CANCER: ITS PROBABLE CAUSE."

To the Editors of THE LANCET.

SIRS,—In the July number of the *Nineteenth Century* there appears an article under the above heading, on which I should like to make a few remarks.

The writer begins by giving data to show that the increase is real, a fact which few medical men will dispute. He then proceeds to give his opinions as to the cause of this increase, based upon the records of the Cancer Hospital, at which institution, he states, there have been treated 21,830 women between 1851 (the year of its foundation) and 1888. From these records he estimates that carcinoma or malignant adenoma, or cancer derived from the secreting cells of glands, is caused by a sudden injury, as by a blow, in the gland (female) most frequently attacked only to the extent of 11 per cent., whereas "in the remaining 89 per cent. a *neurotic causation* (by mental distress) can alone be discovered." Further on he remarks that of the above number of women "no fewer than 17,060, or 78 per cent., are recorded as afflicted with cancer here (*sic*) originating." The author, however, appends the following statement: "By way of roughly testing the proportion again between the aggregate of such cases and those in which the influence of neurotic factors is more or less strikingly apparent, it is found that, of the last 250 female patients admitted with the special forms of cancer referred to, 43 gave some

grounds for the suspicion of mechanical injury as the direct excitant, of whom, however, 15 described themselves as having undergone much previous distress and anxiety in the period immediately preceding the appearance of the new growth; in 19 no obvious cause was apparent; 32 gave a history of specially laborious occupations of hard work and privation; while in 156, or 62 per cent., an account of immediately anticedent mental trouble (to the exclusion of every other possible factor), often in very poignant and unmistakable form, was ascertained on a necessarily somewhat cursory investigation." Heredity, race, and diet, as factors, are but briefly alluded to, and soil and climate are referred to as follows: "In favour of other general conditions which have been suggested as tending to promote the prevalence of cancers—e.g., considerations of soil, climate, race, diet, &c.—no even plausible evidence of validity, as countenanced by the history of particular cases, can be discovered. Some are manifestly, however, included in the sphere of the cause here put forth; such, for instance, as the *reputed* prevalence of cancer in 'large towns situated on rivers which periodically overflow their banks,' presumably centres of busy trade or manufacture." The writer concludes in the following words: "Until society emerges into some calmer sea, or until the conditions under which men and women now commence their voyage are materially improved, a progressive increase in the prevalence of cancer duly proportionate to the growing severity of the struggle for existence may be predicted as a matter of course."

In the sequel I shall have to show that the writer has neither grasped the subject on which he has written, nor has he shown himself conversant with the geographical distribution of this disease among females; and, moreover, that his conclusions are hasty and cannot be accepted by the medical profession. As to the "neurotic factors" which are alleged to be the cause of the local prevalence and general increase of cancer, neither the public nor the medical practitioner need be told that whatever depresses either locally or generally the healthy powers of the nervous system renders either the whole or part of the body more susceptible to the invasion of disease. And we can easily conceive the histories of cancer victims to afford abundant evidence of misery, anxiety, and struggle for existence; but the same antecedents, concomitants, and sequels can be found in the histories of many other diseases. The writer has had at his disposal the histories of over 21,000 females more or less the subjects of cancer, and yet he has made no use of them except to furnish the statement that in 78 per cent. the disease affected the "female gland." Such a mass of personal history as those records must contain, if they had been properly kept, could not fail to afford information as to the birth-place, residence, and occupation of the 21,830 female patients attending the Cancer Hospital during thirty-seven years; yet not one word do we find in the whole article that would lead us to believe that these important factors had been thought of. With the exception above mentioned, the writer confines himself to the last 250 cases, upon which he apparently prefers to base his theory that the struggle for existence in "the Victorian era" is the cause of the increase of cancer. Had the author well studied the above mass of records, and noted the *localities* where these 21,850 cancer cases were born, had resided, and contracted their disease, he would have contributed largely to medical science. But he has preferred to ignore the effect of local configuration of the land, local soil, and local floods on local climate, as they cannot be made to fit in with his struggle-for-existence theory.

The writer quotes part of an aphorism that I formulated when I first brought the subject of cancer-distribution among females before the Medical Society of London in November, 1868, thus: "Such, for instance, as the reputed prevalence of cancer in 'large towns situated on rivers which periodically overflow their banks,'" and then adds, "presumably centres of busy trade or manufacture," I suppose with the view of supporting the struggle-for-existence theory. From this remark it is evidently desired to make the public believe that "the struggle for existence," and not the local climates produced by the configuration, the geological character of the land, and the periodical floods, in combination, was the cause of the high mortality from cancer in such towns, and therefore that those towns in which the struggle was most intense would necessarily have the highest death-rates from cancer. The remark is an unfortunate one for his case, as it would lead us to infer that this all-powerful struggle is least in such densely populated "centres of busy trade and manufacture" as the *low* mortality towns of Liverpool, Manchester, Bradford, Oldham, Leeds, &c., and that it is most intense in the cathedral cities of Worcester and Gloucester, and in the towns of Shrewsbury, Tewkesbury, Cheltenham, and Stratford-on-Avon, all of which are characterised by a *high* mortality from this cause, and all more or less subject to the periodical floods of the rivers Severn and Avon.

In conclusion, I will draw attention to some facts which should not for a moment be lost sight of in any investigation carried on with the view of throwing light upon the cause of the local prevalence and the general increase of cancer. I have shown, by means of the late Dr. Farr's statistics, published in the decennial reports of the late Registrar-General, Major Graham, for the years 1851–1860 and 1861–1870, that the highest mortality from cancer among females is to be found in certain riparial districts and towns subject to floods and possessing the characteristics of soil and land configuration above described. This being the case, it will be necessary to study them in connexion with the growth of the population, the operations of agriculture (such as the drainage of land) and the means taken under the several Public Health Acts for the removal of sewage from towns.

We have first to consider briefly the growth of the population. Dr. Farr's statistics which I have used in my inquiry date from the decennial reports for 1851–1860. From 1851 to 1881 the population of England and Wales grew from 17,927,609 to 25,974,439, or from a density of 308·1 to the square mile to one of 446·4; an increase equal to 8,046,830 persons, or 138·3 to a square mile respectively; an increase almost equal to the whole population in 1801, which then only amounted to 8,892,536, or 153·0 to the square mile; so that the enormous increase alone in the population during the 30 years 1851–1881 equalled the entire population at the beginning of the century, less 845,706; and as to the density, the increase alone in this respect equalled that in 1801, less 14·7 persons to the square mile. Whilst this great increase was taking place in the population on the land, the areas of the watercourses which carry off their sewage remained the same. Since 1851, among the most important improvements in agriculture must be ranked the drainage of the land, which has been carried out to an unprecedented extent since then. The effect of these operations has been to drain the land of excessive moisture both completely and rapidly, and at the same time to afford facilities for heavy rainfalls rapidly to affect the watercourses; hence it is a matter of late experience that, since this system of drainage has been adopted, the floods have not only been more sudden and frequent, but their waters have risen higher, and as a natural consequence have covered larger areas. This increase in the number, suddenness, and extent of floods has been coincident with the increase of cancer among females in the flooded areas. Lastly, the mode of the removal of sewage from houses, under the several Public Health Acts which have come into operation since 1851-60, have largely contributed to increase the foulness of the river waters. Under these Acts a vast number of cesspits and other receptacles of sewage and filth have been done away with which formerly slowly drained their liquid contents into the soil. This old-fashioned method was contemporary with defective town drainage, which, before the general introduction of the water-carriage system, conveyed the sewage slowly away to the rivers. To this succeeded the watercloset epoch, during which sewage was rapidly forced into the drains by a large amount of water. Then the old town drains were found inadequate for the extra work put upon them, and extensive town-drainage works were carried out all over the country to meet these exigencies. Then, again, it was found that the old-fashioned method of water-supply by means of wells and watercourses was not equal to the requirements of the new system of water carriage, the wells becoming exhausted and the watercourses polluted from the rapid introduction of filth into them by the large sewers. To meet this difficulty fresh sources of water were sought for and found, the result being that an enormous amount found its way into the sewers, which rapidly carried their contents into the watercourses, which became more and more polluted, and in too many cases remain so, notwithstanding the Rivers Pollution Commission and the feeble Sanitary Acts which followed its reports. I have said enough to show how our floods have been

gradually increasing in suddenness, extent, and foulness during the last forty years, and we all know that cancer has been increasing coincidently, almost *pari passu* with the increase of this flood nuisance, which is a disgrace to sanitary science and the cause of many more preventable deaths than even cancer contributes to the mortality records of our country. Until this growing evil is checked, we may expect the local prevalence and general increase of cancer to continue. I am, Sirs, yours obediently,

July 16th, 1890. ALFRED HAVILAND.

ASYLUM NURSES.

To the Editors of THE LANCET.

SIRS,—The letter of "Verax" which appears in the current number of THE LANCET is most refreshing, and tends entirely in the right direction. By all means let there be a Commission if possible, and let the evidence be taken from the nurses themselves. I think "Verax" puts the time of service at rather an extreme limit when he says twenty or twenty-five years. Few people are able to form a comprehensive idea at all of what is meant by spending such a length of years (almost a lifetime) among and in close contact with the insane. Speaking generally, too, the hours are rather longer than he seems to think. Nurses and attendants are on duty from 6 A.M. to 8 P.M. During this time their anxiety is constant, they are surrounded by the most harrowing pictures of humanity, and are, as a rule, bathed as it were by an atmosphere whose tendency it is to deprave those that breathe it morally, physically, and intellectually. Their periods of leave may be reckoned as follows: Fourteen days annually and forty-two hours out of each month. In other words, they are at their work for 4434 hours every year out of a possible 5110. In general hospitals nurses may come and go, and the patients will not suffer much. In asylums it is not so. The more a nurse knows the individual peculiarities of the patients under her care the better is she enabled to guard against accidents and casualties and attend to and supply their wants. Long service is to be desired, and should therefore be encouraged.

I am, Sirs, faithfully yours,

Aug. 3rd, 1890. NON NOBIS SOLUM.

EVIDENCE OF NURSES AT THE LORDS' COMMITTEE ON HOSPITALS.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of July 26th, I observe a short letter from Mr. Roberts, Secretary to the London Hospital, in which he endeavours, in courteous terms, to discredit a statement made by me, in your impression of July 12th, concerning a probationer who was dismissed from the London Hospital. It would probably be difficult in Mr. Roberts' position for him to arrive at the truth of such a transaction; and, indeed, his letter seems to indicate but a slight acquaintance with the arrangements of the nursing department. The probationer in question was attached to a nursing institution, of which, under present arrangements, *all* the probationers are *always* trained at the London Hospital, and was therefore virtually a probationer of the London Hospital. I therefore adhere to my statement that she was dismissed without warning, and without sufficient reason. If the institution to which this probationer was attached had had other means of training, the authorities would gladly have retained her services.

I am, Sirs, your obedient servant,

Tottenham, Aug. 5th, 1890. E. HOOPER MAY.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Assizes: Trials for Murder.

ON the 1st inst., John Duckworth Pickavance, a shoemaker, and his wife were tried for the wilful murder of Mr. Henry Granger Foster, a colliery proprietor, residing at Brook Lodge, Rainford, on July 7th last. The case has attracted much local attention, the crime having been so recently committed, and the incidents being well known in all its details. The social position of the deceased was a superior one. The alleged former relations between him and the female prisoner were presumed to be the motive for the murder; while the crime was of so cold-blooded a character as to invest the entire proceedings with much interest. This was intensified by the nature of the defence, and by the evidence of Dr. Wiglesworth and Dr. Barr, both of whom were called to speak as to the male prisoner's state of mind. The former considered him to be, though not actually insane, of insane temperament. Dr. Barr, who saw him daily for eleven days, was of opinion that he was able to control his actions and to discriminate between right and wrong. Mr. Barlow of Prescot, who had seen him nine months ago, stated that he complained of pains in his head and that he heard noises; he considered him to be of unsound mind. The facts of the murder were not disputed by the counsel for the defence. Dr. Murdock of Rainford found the left little finger shattered, probably by a bullet, a circular wound of the left temple which penetrated to the bone, a corresponding laceration of the brain, and on the surface of the right side of the brain a clot of blood. Inside the brain he found a clot of blood on the right side and a bullet. On the right shoulder blade there was a bullet wound penetrating half an inch, and on the left side of the abdomen a contused wound, into which the clothing had penetrated. Another bullet was found in the lining of the deceased's coat. It was stated that the deceased had seduced the female prisoner, and that her husband had been always jealous of him. The jury acquitted the male prisoner on the ground of insanity, and found the female prisoner not guilty. The trial commenced at 9.30 A.M. on Aug. 1st; the judge did not commence his summing up until a late hour in the evening, and it was after midnight when the jury returned into court, after nearly three hours' deliberation.

On the 4th inst., Leah Charlton, a married woman, aged twenty-eight, was charged with the wilful murder of her son, William Robert Charlton, on May 8th last, at Wavertree, near Liverpool. Other indictments charged her with the murder of two daughters at the same time and place. From the evidence of Mr. Michell, surgeon, who was called in at the time of the occurrence, as well as that of Dr. Wiglesworth and of Mr. Beamish, of H. M. Prison, Walton, it was perfectly clear that the unfortunate woman was suffering at the time from melancholia and was not accountable for her actions. She was therefore acquitted on the ground of insanity.

The New Brighton Murder.

Circumstances made this case one of much local interest, the scene of the tragedy being well known to many who have their place of business in Liverpool, but reside in New Brighton. The murder was, as described by Mr. Justice Stephen, of a most horrible character. The prisoner, after years of ill-usage towards the woman who was the mother of his children but not his wife, sought to revenge himself upon her for non-compliance with his unreasonable demands, first by informing her landlord that she was not his wife, and therefore not entitled to bear his name (Spicer), and next by murdering two of their children. He was caught literally red-handed, but some time had elapsed, and it was the very careful examination of Dr. Ross of New Brighton, of the county analyst, and of the local police, which placed the crime beyond all possibility of doubt, and the jury found their verdict after a few minutes' deliberation.

Remarkable Case of Fractured Ribs.

An inquest has been held at the County Asylum, Rainhill, by Mr. Brighouse, the county coroner, upon the body of a labourer, forty years of age, who was admitted into the asylum on the 24th ult. from the hospital of the West Derby Union, and who died on the 30th ult. On a post-mortem examination being made, nine ribs were found to be fractured, but how this was caused remains a mystery. The man was removed home from his work by a fellow-labourer, at the manager's request, on account of his strangeness of mind. This was on May 30th. On June 17th he was removed to the Union Hospital, Mill-road, and examined by Dr. Chapman, who found him suffering from general paralysis. After some days he became excitable and quarrelled with the other patients; there were some bruises on his chest, but no evidence of any fractured ribs. He was removed with two other patients, in a landau, by the relieving officer, and on his arrival there was examined by Dr. Drummond, who found numerous bruises on the chest and a swelling on the left side. Mr. Beaver, under whose care the deceased was placed, found one rib fractured, and

after death nine ribs were found to be fractured; the bones were fragile, and could be broken between the thumb and finger. Dr. Wiglesworth, medical superintendent of the asylum, who had seen the case from first to last with the exception of a short interval, was of opinion that the fractures had taken place ten days previously to admission into the asylum. The jury returned a verdict of "Death from paralysis and pneumonia, accelerated by the fractured ribs, but how such injuries were sustained there was not sufficient evidence to show."

Milk Adulteration: Inadequate Penalties.

Two farmers were prosecuted for selling milk largely diluted with water to the authorities of the Bluecoat Hospital, and were fined, the penalties amounting to about £10 in one case and £7 in the other. As milk forms a principal part of the children's diet, this fraud was a very cruel one. A similar fraud was perpetrated on the patients of the Royal Infirmary not long ago, and as the penalties inflicted did not act as a warning, it is to be hoped that some means may be found of preventing such cruel frauds in the future. Imprisonment, without the option of a fine, would not be too severe a punishment for such offenders.

Liverpool, Aug. 4th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Sanitary Condition of the City of Durham.

DR. E. JEPSON'S letter on the insanitary condition of the working-class dwellings in the city of Durham has aroused some controversy and newspaper correspondence. A writer in one of our local papers says that if Dr. Jepson's views are to prevail it might be necessary to "level to the ground" a considerable portion of the city of Durham, as it is an old town. Dr. Jepson is of course able to defend his own statements and position, but I will merely say that, from observation, a considerable portion of the city now occupied by workmen is unfit for the purpose, incapable of repair, and deserves to be demolished.

Carlisle and Silloth.

The Distribution Committee of the Carlisle Hospital Sunday Fund have divided £746 amongst the following—Cumberland Infirmary, Carlisle Dispensary, and Workington Infirmary. Sufficient information is not obtainable to enable a comparison to be made between this and last year as to the amount collected.

Washington Hall, Durham.

I mentioned in these Notes some time since that Sir Lowthian Bell, Bart., the proprietor, had kindly offered to present Washington Hall to the Corporation of Newcastle, to be used as a convalescent home for the sick poor of this city. For some reasons the Corporation did not avail itself of the offer; but it appears it is, notwithstanding, to be used for a philanthropic object—namely, as a home for waifs and strays. A home of this nature has been carried on for some time at Gosforth by Miss Watson, and this offer of Sir Lowthian Bell will enable her to greatly extend her good work. It may be mentioned that from the family of Wessington, who held this manor (*temp.* Richard III.), John Washington was descended, from whom the ninth in descent was George Washington, first President of the United States. The old Hall is still frequently visited by Americans.

Harrogate and Ripon Hospitals.

The Mayor of Harrogate, Mr. Sampson Fox, J.P., has given £150 to the Harrogate hospitals—viz, £75 to the Bath Hospital, and £75 to the Cottage Hospital. Last week the Harrogate town band went over to Ripon and gave a performance in the market place for the benefit of the Ripon Cottage Hospital, in which they were joined by the Ripon Volunteers band, a handsome collection being made at the termination of the performance.

Sunderland.

I am glad to hear that some important contributions have been lately given to the Sunderland Infirmary. The South Helton Coal Company have subscribed nearly £200; and the three local bankers in Sunderland—viz., Messrs. Backhouse, Woods, and Lambton and Co.—have given £100 each.

Will of a Newcastle Benefactor.

It is stated that the will of the late Mr. John Clayton (whose bequests to Newcastle charities I have already noted in your columns) has been lodged for probate, and that the personalty has been sworn at £723,405 8*s.* 10*d.* net.

Newcastle on-Tyne, August 7th.

EDINBURGH.

(FROM OUR OWN CORRESPONDENT.)

Graduation Day at the University.

FRIDAY, Aug. 1st, was medical graduation day at the University. Over fifty graduates obtained their doctorate in Medicine, and 146 obtained the degrees of M.B., C.M. A number of the theses for the M.D. were commended, and many of the subjects were of so much interest that it cannot but be regretted the University does not provide for their publication. Professor Simpson addressed the graduates. He first referred to the necessity for physical exercise, and recalled his own student days when there was nothing in the arrangements at the University to suggest that they were to be turned out more than medical machines, but that now there was the athletic club, with its numerous branches and its gymnasium. Next he paid a passing tribute to the Volunteer service, and expressed regret at the unwisdom of the military authorities as regards the question of relative rank. He then indicated the advantage to be gained from the Student's Representative Council; and laid special stress on some of the movements towards which, as is well known here, he is specially sympathetic—namely, the Total Abstinence Society, the White Cross Society, and the Sunday evening meetings which are held by Professor Drummond, and which are immensely popular.

The British Association.

At a meeting of various public bodies called by the Lord Provost, it was resolved to renew the invitation to this Association to meet here in 1892.

Registration of Plumbers.

A Congress of Councils connected with the national registration of plumbers was held here at the end of last week. The congress expressed its opinion that steps should be taken to assist the municipal authorities in drawing up and enforcing suitable by-laws bearing on plumber work in buildings. It was also urged that plumbers, whether masters, men, or apprentices, must be made to realise the responsibility which lay upon them for the public health, and that they must be brought to this not only by conviction but by compulsion.

Royal Maternity and Simpson Memorial Hospital.

Mr. J. Lawson Williams, M.B., C.M., and Mr. E. F. Armour, M.A., M.B., C.M., have been appointed house surgeons to this hospital.

Health of the City.

The mortality last week was 14 per 1000. Diseases of the chest accounted for 21 deaths, and zymotic diseases for 13. The intimations included 6 of typhoid, 4 of diphtheria, 25 of scarlatina, and 35 of measles.

A New Bursary for the University.

A new bursary of £150 per annum, tenable for two years, has been placed at the disposal of the University. It is one of those founded by the Royal Commission of the 1851 Exhibition, and is intended for students who have passed through the usual curriculum and given promise of future work in physical science.

Female Medical Students and the Royal Infirmary.

It was intimated here that application had been made to the managers of the Royal Infirmary to admit women to clinical instruction in the wards. The matter has been referred to the staff by the managers, but, as has been already said, the question is surrounded by great difficulties.

Edinburgh, Aug. 5th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Experiments in Anæsthetics.

AT the Surgical Society of Paris M. Regnier recently communicated his experiences of the method of administering chloroform, preceded by hypodermic injections of a combined solution of atropine and morphine, which has

been advocated by Professor Dastre. Professor Dastre found that in the case of dogs this method was quite successful in controlling the action, both direct and reflex, of the pneumogastric nerve on the heart. M. Aubert of Lyons applied the method in a modified manner to man. Fifteen minutes before beginning a surgical operation he injected hypodermically a solution containing one centigramme and a half of hydrochlorate of morphia and one-fourth to three-fourths of a milligramme of atropine. M. Regnier put this method in practice in his hospital service. No great advantages, however, were observed so far as he had carried out the plan. Nevertheless it was his intention to give it a fair trial were these trials not brought to an abrupt conclusion by the death of one of his patients. It was precisely owing to this unfortunate occurrence that he determined to bring this method of inducing anæsthesia before the Society for early discussion. His fatal case was that of a young girl aged sixteen, chlorotic, and the subject of tubercular disease of the bones of her hand, for which he was about to operate. Half an hour before the time of the operation a solution containing half a centigramme of morphine and a fourth of a milligramme of atropine was injected under the skin; then she was put under chloroform in the ordinary way, of which between twenty and thirty centigrammes only were consumed. The operation lasted barely ten minutes, and was already concluded some minutes, when the patient was observed to become extremely pale, then livid, with irregular pulse and feeble respiratory movements, which latter speedily ceased altogether; the pupil, which up to this was contracted, now became markedly dilated. Artificial respiration, electrisation of the cardiac region, and other methods for inducing reaction were at once had recourse to, but all to no purpose. At the post-mortem, which was performed by Professor Verneuil, no evidence of asphyxia could be discovered, but there was plainly visible cerebral and bulbar anæmia. The fatal termination would appear to have been due to bulbar paralysis, evidenced by cardiac acceleration and dilated pupils. The association of atropine and morphine seems to have impeded the elimination of the chloroform, and this would account for the tardy appearance of the fatal symptoms. Now, different experiments made by Villejean appear to establish the fact that there is a fundamental difference between the way in which anæsthesia is brought about in man and in the dog respectively. In adult human beings a centigramme of morphine does not suffice to bring about sleep, and therefore a certain quantity of chloroform is necessary, whereas in the dog a comparatively small amount of morphine is enough. On the whole, M. Regnier concluded that this method of bringing about anæsthesia, while it rendered less the reflex risks at the beginning of chloroformisation, on the contrary aggravated those towards the end, and that, in short, it was an excellent plan in the laboratory, but unfitted for the necessities of surgical anæsthesia. M. Terrier had also tried this method, and employed for injection a centigramme of morphine and a milligramme of atropine. His observations differed according to the sex of the patient. In males the period of excitement was the same and the awakening in general rapid. In women he found the agitated period altogether wanting, and the duration of the inhalations shortened by at least fifteen to twenty minutes. The awakening, on the other hand, was postponed for about half an hour after the administration of the anæsthetic. He also had met with a death. A young woman on whom he had performed nephrectomy succumbed one hour and a half after. She had come to for a couple of minutes, and then quite suddenly the respirations gradually, but rapidly, failed, and she became cyanosed. It was of course possible she had succumbed to the shock of the operation, but it is nevertheless not improbable that the method under discussion places patients in a feeble condition for resistance.

Electricity in Uterine Fibromata.

At the same Society, M. Lucas-Championnière read a paper on the Treatment by Electricity of Uterine Fibroids. His conclusions may be summarised as follows: The electrical treatment of these tumours is, in his opinion, the best of the purely medical methods. The greater number of cases derive decided benefit from it, and he found the number who could not support it extremely insignificant. The cases which in his experience derive most benefit are those of aged women and those at or about the menopause. In younger women, too, the tumours diminish in size, while the pain and hæmorrhages become less. In conclusion, he expressed the opinion that whenever any other operation was deemed unadvisable, from one cause or another, recourse might be had with a fair prospect of benefit to the electrical treatment. M. Quénu also spoke at some length on the subject, and concluded that, as to the indications for the application of the method, one could not base them either on the exact position of the tumours or on the integrity of the contiguous structures, this latter being no easy matter to determine; nor could he consider age as a guide, for in young women satisfactory results were not infrequently obtained. One could not, then, predict what would be the result in any given case, but he also was of the opinion that electricity should be employed in any case where surgical interference might be considered undesirable.

Scientific Missions.

Dr. Picqué, formerly *chef de clinique* of the Paris Faculty, and now a surgeon to one of the hospitals, has been charged with a mission to study and inquire into the surgical organisation in the hospitals of Germany, Russia, Austria, and Turkey. The Government have likewise sent Dr. Geo. Gaillard to Germany to study the system of organisation of the German odontological schools, and to report thereon; while Dr. Dutreuil de Rhins has been despatched on a mission of scientific exploration to Upper Asia.

Paris, August 5th.

Obituary.

JOHN WAY, M.D. LOND.

A LARGE circle of friends and patients will mourn the death of Dr. John Way of Eaton-square, who died on the 23rd of July at Wellington, New Zealand, whither he had sailed in the hope of recruiting his health by a sea voyage. Born in 1823 at Hartland, North Devon, he commenced the study of the profession by being apprenticed to Mr. Ward, a well-known and successful practitioner at Bodmin. In 1853 he entered King's College, London, as a matriculated student, where he had a distinguished career. He gained the first, second, and third year's scholarships, various prizes, and filled the offices of house surgeon and house physician. After practising for a short time at Gresford, Denbighshire, he moved by invitation to St. Austell, Cornwall, but the loss of his wife drove him thence after a brief residence, and in 1860 he commenced practice in St. George's-road, Pimlico. In 1865 he went to Eaton-square, and from that time conducted a large practice in that neighbourhood. No man was ever kinder or more beloved by his patients. During the last two years ill health had debarred him from practice, but he was cheered by the visits of many patients and friends. Dr. Way did not contribute to the literature of the profession, but he was a man of great culture, widely read and fond of art, and for many years a member of the Burlington Fine Arts Club.

WALTER BLUNDELL CROKER, L.R.C.S.I.

WE are sorry to have to announce the death, at a very early age, of a young medical man who was a great favourite with his fellow students and with the profession in Belfast. Mr. W. B. Croker became qualified about a year ago, and two months since was elected house physician in the Belfast Royal Hospital, where he was very much beloved by the patients and valued as a careful resident by the medical staff. About a fortnight since he became ill, and as there was evidence of obstruction of the bowels, it was decided to do an exploratory abdominal section on July 28th. It was then found that there was a fibrous stricture forming a loop through which the bowel had passed and by which it was strangulated. This having been divided, it was hoped that Mr. Croker might have recovered, and for a few days he rallied, but died from exhaustion on August 1st. Sincere sympathy is felt for his father, Dr. George Croker of Belfast.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen, having passed the necessary examination, have been admitted Diplomates in Public Health:—

Adie, Alexander James, L.R.C.P.Lond., Charing-cross Hospital.
Aldridge, Norman Elliott, M.B.Edin., Edinburgh.
Bond, Charles Knox, L.R.C.P.Lond., M.R.C.S., St. Thomas's.
Brook, Henry Darville, L.R.C.P.Lond., M.R.C.S., St. Thomas's.
Cooper, Ardaseer Dossabhoy, L.R.C.P.Lond., M.R.C.S., Bombay.
Crabb, James, M.D.Edin., Edinburgh and University College.
Cross, Robt. Geo., L.R.C.P.Lond., M.R.C.S., St. Bartholomew's.
Dumbleton, Chas. E., M.R.C.S., Camb., Middlx., and Univ. Coll.
Green, Charles David, M.D.Lond., L.R.C.P.Lond., St. Thomas's.
Gubbin, Geo. Frederick, L.R.C.P.Lond., M.R.C.S., Westminster.
Heaven, John C., L.R.C.P. Lond., M.R.C.S., Bristol & St. Thos.'s.
Jollye, Francis William, M.R.C.S., King's College.
Lamb, John Marshall, M.B.Aberd., Aberdeen.
Leach, John Comyns, M.D.Durh., M.R.C.S., University College.
M'Lean, Isaac Crauford, M.D.Edin., Belfast and Univ. College.
Monk, Henry Geo. Hawkins, M.R.C.S., King's Coll. and Univ. Coll.
Scott, Gavin Steel, M.D.Glas., Glasgow.
Smith, James, M.D.Edin., Edinburgh.
Thompson, Chas. Herbert, M.D.Dub., St. Thomas's Hospital.
Valentine, Thos. H. Ambrose, L.R.C.P.Lond., M.R.C.S., St. Barth.
Waldo, Fred. J., L.R.C.P. Lond. M.R.C.S., Camb. and St. Barthol.
Warry, John King, M.B.Lond., London Hospital.
Whitehead, Hayward R., F.R.C.S., L.R.C.P.Lond., Charing-cross.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen, in addition to those whose names appeared in the list of Members of the College of Surgeons in our last issue, having conformed to the by-laws and regulations, and passed the required examinations, were at a meeting of the College on July 31st admitted Licentiates:

Bell, George Lawaluk, Melbourne.
Bennett, Francis Dillon, St. Bartholomew's Hospital.
Biden, George Henry, Charing-cross Hospital.
Burt, Cyril Cecil Barrow, Westminster Hospital.
Butterfield, Nathaniel Augustus, University College.
Guinness, Henry Grattan, London Hospital.
Lourensz, Charles Ball, Ceylon.
McGregor, George, Guy's Hospital.
Osborne, Frank, St. Thomas's Hospital.

BRITISH MEDICAL SERVICE.—The following is the list of Surgeons on Probation of the Medical Staff of the British Army who were successful at both the London and Netley Examinations. The prizes are awarded for marks gained in the special subjects taught at the Army Medical School. The final positions of these gentlemen are determined by the marks gained in London added to those gained at Netley, and the combined numbers are accordingly shown in the list which follows:—

	Marks.		Marks.
Smithson, A. E.	5302	Jackson, R. W. H.	5098
Whiston, P. H.	5249	Mawhinny, R. J. W. ..	4810
McLoughlin, G. S.	5243	Bray, G. A. T.	4800
Parry, H. J.	5117	Forde, B.	4785
Beveridge, W. W. O.	5113	Ferguson, J. D.	4683
*Fred. Smith (1st Class Staff Sergeant M.S.C.)	2803 (Netley marks only).		

* Gained the Herbert Prize of £20, with the Montefiore Second Prize.

INDIAN MEDICAL SERVICE.—The following is the list of Surgeons on Probation in Her Majesty's Indian Medical Service who were successful at both the London and Netley examinations. The prizes are awarded for marks gained in the special subjects taught at the Army Medical School. The final positions of these gentlemen are determined by the marks gained in London added to those gained at Netley, and the combined numbers are accordingly shown in the list which follows:—

	Marks.		Marks.
*Macnab, A. J.	5895	‡Wilson, W. McN.	5285
†Jackson, J.	5852	Sutherland, W. D.	5220
§Smith, H.	5805	Carr-White, P.	5180
‖Laird, H. B.	5745	Wright, E. H.	5178
Wimberley, C. N. C. ..	5613	Molesworth, W.	5160
¶Hore, E. W.	5530	Fearnside, C. F.	5134
Street, A. J.	5452	Johnston, C. A.	5005
Heath, A. J.	5442	Giffard, G. G.	5075
Jameson, J. B.	5430		

* Gained the Montefiore Medal and Prize of 20 guineas.
† Gained the Prize in Pathology presented by Sir Jos. Fayrer, K.C.S.I.
‡ Gained the Martin Memorial Gold Medal.
§ Gained the Prize in Clinical Medicine presented by Surgeon-General W. C. Maclean, C.B.
‖ Gained the Parkes Memorial Bronze Medal.
¶ Gained the De Chaumont Prize in Hygiene.

UNIVERSITY OF EDINBURGH.—The following gentlemen received the degrees of M.B., C.M., on Aug. 1st:—

Alexander, E. H., Edinburgh.
Balfour, D. H., Bowness.
Balfour, T. S., Edinburgh.
Bartlett, G. H., Carlisle.
Bower, J. A., Edinburgh.
Brandt, J. C., Edinburgh.
Brown, F. L., Edinburgh.
Brown, Robert, Edinburgh.
Brown-Lester, John, Edinburgh.
Bruce, John, Kelso.
Buist, H. J. M., Edinburgh.
Bunting, W. H., Accrington.
Burnett, J. R., Carlisle.
Burns, W. C., Carluke.
Cameron, Donald, Edinburgh.
Chasseaud, H. M., Smyrna.
Clarkson, R. D., Linlithgow.
Craig, George, Musselburgh.
Crerar, Peter, Crieff.
Currie, James, Kelso.
Davis, S. B., Gloucester.
Dick, J. A., Edinburgh.
Dickson, Walter, Edinburgh.
Dixon, C. J. W., Appleby.
Douglas, C. C., Edinburgh.
Dowden, J. W., Edinburgh.
Dunbar, Alex., Edinburgh.
Duncan, A. S., Montrose.
Edmondson, John, Frodsham.
Edwards, Henry, Carnarvon.
Evans, O. F., Anglesea.
Ewing, B. G., Tyrone.
Farquharson, D. P.M., St. Fillans.
Fenn, R. M., Edinburgh.
Fitzgerald, Gerald, Edinburgh.
Fleming, Samuel, Halifax.
Fryer, R. C., Cape Colony.
Genney, F. S., Edinburgh.
Gibbs, S. A., Edinburgh.
Gibson, E. V., Ashbourne.
Giles, A. B., Edinburgh.
Gillies, P. H., Oban.
Goldie, E. M., Forest-gate.
Gonin, E. H., Brighton.
Goudie, Henry, Leith.
Gray, A. C. E., Edinburgh.
Gray, J. D., Crieff.
Greatbatch, H. W., Stoke-on-Trent.
Greaves, E. C., Barbadoes.
Green, T. A., Skipton-in-Craven.
Hamper, C. N., Bristol.
Harrold, R. E., Woodford.
Henderson, Alex., Edinburgh.
Hermon, J. M., Montrose.
Horden, A. G., Hay, Breconshire.
Horne, R. M., Slamannan.
Howard-Jones, J., Carmarthensh.
Hughes, T. E., Hereford.
Huie, H. G., Edinburgh.
Johnson, J. H., Melbourne.
Jones, E. H., Holywell, N. Wales.
Jones, T. O., Llanllyfni, N.W.
Kay, J. M. M., Edinburgh.
Kershaw, J. G., Oldham.
Kotzé, J. J. J., Capetown.
Lambert, J. R. P., Eastbourne.
Lancaster, L. T., Grindleton.
Lawson-Williams, J., Newton-Stewart.
Lazarus, A. B., Victoria.
Lees, C. F., Whitsome.
Lockett, G. V., Edinburgh.
McClosky, A. J., Penang.
McLaren, Dugald, Edinburgh.
Malabre, H. F., Jamaica.
Marshall, G. B., Edinburgh.
Martin, C. B., Exeter.
Mason, Frank, Barnsley.
Maynard, F. A., Edinburgh.
Meadows, G. S., Saltash.
Melville, H. G., Edinburgh.
Menzies, J. A., Inverkeithing.
Milligan, H. N. D., Bradford.
Mitchell, T. W., Ross-shire.
Moffat, R. N., Graham's Town.
Monnier, J. R., Edinburgh.
Monro, G. H., Perthshire.
Morrison, J. M., Edinburgh.
Morton, J. P., London.
Nicholson, T. D., Penrith.
Nightingale, P. A., Edinburgh.
Ogilvy-Ramsay, M., Dumfriesshire.
Ormsby, C. M., Jamaica.
Owen, O. T., Blackburn.
Palmer, J. C., New Zealand.
Parkinson, T. W., Edinburgh.
Paterson, Wm., Edinburgh.
Pope, R. J., London.
Rankin, W. D., New Brunswick.
Reid, J. M., Montrose.
Robertson, J. A., Whitsome.
Robertson, J. B., Bridge of Allan.
Robertson, R. J., Perth.
Robertson, W. J., West Dulwich.
Robson, J. D., Dumfriesshire.
Rogers, J. S. Y., Dundee.
Ronaldson, R. M., Edinburgh.
Rorie, David, Edinburgh.
Rose, Murdo, Inverness.
Rutherford, J. V. W., Newcastle-on-Tyne.
Rutter, G. H., London.
Sapp, J. G. V., Southsea.
Scott, C. W., Elstree, Herts.
Scott, Robert, Newport, Fife.
Senhouse, L. S., Edinburgh.
Sharman, R. P., Caergwrle.
Sharpe, W. C., Gloucester.
Sherman, Theodore, Edinburgh.
Simmers, Wm., Edinburgh.
Simmins, R. B., Edinburgh.
Smith, J. F., Whithorn.
Smith, W. C., Edinburgh.
Stain, W. C. W., Edinburgh.
Stenhouse, A. J. M., Dunfermline
Sutherland, G. W., London.
Thomas, J. E., Holywell, N. W.
Thompson, G. W., Buenos Ayres.
Thomson, Alex., Arbroath.
Thomson, A. K., Edinburgh.
Thomson, J. E., Edinburgh.
Thornton, Geo., Skipton.
Tosswill, J. C., Harrow.
Veitch, Alex., Edinburgh.
Walker, A. H., Stalham, Norfolk.
Walker, W. K., Glasgow.
Weatherlie, L. J., Edinburgh.
Webb, S. R., Hampstead.
Wilhelm, A. R. A., Cape Colony.
Williams, A. W., London.
Williams, John, Kidwelly, S. W.
Williams, J. D., Carnarvon.
Williams, J. R., Carnarvon.
Wilson, A. O., Edinburgh.
Wilson, G. M., Launceston.
Wood, O. R. M., Woodbridge.
Younan, James, Calcutta.
Young, D. P., Edinburgh.

CONJOINT SCHEME OF THE COLLEGE OF PHYSICIANS AND ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following candidates have passed the Final Professional Examination:—

Edward Cosgrave, Brereton G. Elliott, Joseph Patrick Fagan, John McIntire Falkiner, Ernest George Fenton, Mary Josephine Hannan, Alexander Robert Rocke Hudson, Garret Waters Joyce, E. P. Levy, Alfred Ernest Keble, David Martin, Philip Edwin, Welsh MacAdam, Renwick Potts, William Alexander Seymour, Laurence Callaghan Slevin, and Lawder Thomas Whelan.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the July sittings of the Scottish Conjoint Board in Glasgow, the following candidates passed the Final Examination, and were admitted Licentiates of the three co-operating Colleges:—

Frederic Rawlings, Reddish, Lancashire; Pierce M. Dwyer, Dublin; James Craig, Glasgow; Jane B. Henderson, Portobello; William J. Howarth, Pendleton; Lillias Hamilton, Kensington; J. Mackenzie, Falkirk; Peter A. Docherty, Comrie; Michael O'Shaughnessy, Ardogh, Limerick; William H. Carlisle, Belfast; and John P. Lyons, Clare Castle, co. Clare.

The number of candidates was 39.

UNIVERSITY OF ABERDEEN.—At the graduation ceremony on July 29th the following candidates received degrees in Medicine and Surgery:—

Degree of M.D.—John Anderson, M.A., M.B., C.M., Aberdeen; *Thomas F. Dewar, M.B., C.M., Arbroath; *James Don, M.B., C.M., Wimbledon; John H. Gray, M.B., London; Gray Hassell, M.B., C.M., Wellington, New Zealand; R. A. Ironside, M.B., C.M., London; Joshua Law Kerr, M.B., C.M., Crawshawbooth; John A. Mackenzie, M.B., C.M., Balham, London; William Riddel, M.A., M.B., C.M., Swatow, China; George Shirres, M.B., C.M., Aberdeen.

Degrees of M.B. and C.M.—John Law Adam, Lumphanan; George M. Anderson, Tasmania; Thomas F. William Bell, London; John F. Black, Aberdeen; William A. D. Cooper, Calcutta; James A. Davie, Turriff; William J. M'C. Ettles, Ashby-de-la-Zouche; Alexander Forbes, Old Deer; James Fraser, Aberdeen; James Fraser, Knockando; Alexander Geddes, Portgordon; John Gray, Inverurie; James A. Hargreaves, Rothwell, Yorkshire; Joseph Frank S. Hay, Lucknow, India; James Johnston, Maud, Aberdeen; John M'Donald, Kildrummy; John William M'Vine, Halifax, Yorkshire; Leslie J. Milne, M.A., Aberdeen; William A. Murray, B.A., Scarborough; George Robertson, King Edward; William Russell, Aberdeen; Arthur L. M. Sealy, Croydon; Alexander Sellar, M.A., Huntly; Andrew Macgregor Sinclair, Dumbeath, Caithness; William Allan Smith, Boyndie; †Hugh L. Sutherland, Aberdeen; Thomas Taylor, Keith; Frederick H. Thomson, Belhelvie, Aberdeen; ‡David Morice Tomory, Constantinople; James W. Watson, Elgin; ‡Henry Watt, M.A., Aberdeen; Adolph Zimpel, Constantinople.

John Murray Medal and Scholarship.—William Bulloch.

Diploma in Public Health.—John W. Hutcheon, M.B., C.M.; §William Leslie Mackenzie, M.A., M.B., C.M.; Robert G. McKerron, M.A., M.B., C.M.; Lindlay M. Scott, M.A., M.B., C.M.; George Shirres, M.D.

* Theses considered worthy of commendation.
† Highest academical honours. ‡ Honourable distinction.
§ With credit.

OBSTETRICAL SOCIETY OF LONDON.—The library of the Society will be closed from Aug. 18th to Sept. 18th.

LEPROSY.—The Natal Government has drafted a Leprosy Bill, which proposes that all lepers arriving from India shall be returned.

MORTALITY IN ABYSSINIA.—An Italian merchant established at Shoa, who has just returned to Italy, reports that during his journey to the Tigre, the Emperor Menelek lost 25,000 men, women, and children, who died from typhoid fever and other diseases.

SUICIDE OF A SURGEON.—Mr. Frank Jeeves, L.R.C.P.L. and M.R.C.S., assistant to Mr. G. H. Shaw of Sheffield, committed suicide by cutting his throat on Sunday last. Mental anxiety and fatigue in connexion with the illness of a friend seem to have been the immediate cause of the rash act.

VICTORIA INFIRMARY, GLASGOW.—Miss Barr of Carfin, Cupar-Fife, has presented £10,000 to enable the governors to proceed at once with the erection of a second block of the building which, at her request, is to be a memorial of her relatives, Mr. and Mrs. David Cook and Mr. Robert Barr.

ROYAL COLLEGE OF PHYSICIANS, LONDON.—At the comitia on July 31st the following officers were elected examiners for the ensuing year:—*Chemistry and Chemical Physics*—Charles Henry Ralfe, M.D., John M. Thomson, F.C.S., William Ramsay, F.R.S., Charles Meymott Tidy, M.B., C. W. Heaton, F.C.S. *Materia Medica and Pharmacy*—John Mitchell Bruce, M.D., Herbert Isambard Owen, M.D., Walter Baugh Hadden, M.D., William Hale White, M.D., Cecil Yates Biss, M.D. *Elementary Physiology*—Henry Lewis Jones, M.D., Frederick Walker Mott, M.D. *Physiology*—E. A. Schäfer, F.R.S., Arthur Gamgee, M.D., Charles Scott Sherrington, M.B. *Osteology and Anatomy*—Wilmot Parker Herringham, M.B., Seymour Taylor, M.D. *Medical Anatomy and Principles and Practice of Medicine*—Alfred Baynard Duffin, M.D., Joseph Frank Payne, M.D., Thomas Henry Green, M.D., John Cavafy, M.D., Frederick Thomas Roberts, M.D., Arthur Ernest Sansom, M.D., William Henry Allchin, M.B., Sidney Coupland, M.D., James Frederick Goodhart, M.D., David Bridge Lees, M.D. *Midwifery and Diseases peculiar to Women*—John Braxton Hicks, M.D., John Williams, M.D., Francis Henry Champneys, M.B., Charles James Cullingworth, M.D. *Surgical Anatomy and Principles and Practice of Surgery*—Professor Humphry, F.R.C.S., Nottidge Charles Macnamara, F.R.C.S. *Public Health*—Part I.: Arthur Pearson Luff, M.B. Part II.: Edward Seaton, M.D.

INSOLATIO.—Inquests have been held this week on two cases in London, in which, according to the testimony of the medical witnesses, death was caused more or less directly by the excessive heat.

PRESENTATION.—On July 16th, at Ayr, a handsome silver salver, bearing the names of the donors, was presented by Colonel the Earl of Galloway, K.T., and the officers of the 3rd Battalion Royal Scots Fusiliers, and Captain S. F. Chichester, Adjutant to the battalion, to W. J. Naismith, Esq., M.D., F.R.C.S. Edin., on the occasion of his marriage, as a mark of their esteem for him and appreciation of his services during twenty years' medical charge of the regiment.

UNIVERSITY OF EDINBURGH.—At the graduation ceremony, held on the 31st ult., the following awards of scholarships were announced:—The Ettles Scholarship, for the highest position in the various examinations, to Carstairs Cumming Douglas, M.B., C.M.; the Beaney prize in Anatomy and Surgery, to Gerald Fitzgerald, M.B., C.M.; the Stark Scholarship in Clinical Medicine, to Robert Durward Clarkson, B.Sc., M.B., C.M.; the Freeland Barbour Fellowship in Anatomy, Physiology, and Pathology, to Robert Main Horne, M.B., C.M.; the Buchanan Scholarship in Gynæcology, to Carstairs Cumming Douglas, M.B., C.M.; the James Scott Scholarship in Midwifery, to William Paterson, M.B., C.M.; the Gunning Victoria Jubilee Joseph Black prize in Chemistry, to John Shields, B.Sc.; the Gunning Victoria Jubilee Munro prize in Anatomy, to William George Aitchison Robertson, M.D.; the Cameron prize in Therapeutics, to Sir Joseph Lister, M.B., F.R.S.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on August 5th, 1890.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever	Other diseases.	Total.	
Eastern Hospital	291	42	..	30	2	365	442
North-Western Hospital	278	33	..	6	..	317	415
Western ,,	144	12	..	6	2	164	262
South-Western ,,	160	..	..	..	1	161	340
South-Eastern ,,	197*	10	4	21	3	235	462
Northern ,,	378	24	..	..	..	402	480
Totals	1448	121	4	63	8	1644	2401

* 1 infant with mother.

MEDICAL NOTES IN PARLIAMENT.

Bills Advanced.

IN the House of Lords, during the past week, the Census Bills (England, Wales, and Scotland) and the Pharmacy Act (Ireland, 1875) Amendment Bill were read a third time and passed.

Lunacy.

In reply to Lord Herschell, the Lord Chancellor said he had received information from various quarters that some difficulty was experienced in obtaining judicial authority for reception orders in cases of lunacy. So far the difficulty was due to the insufficiency of justices rather than to any deficiency in the Act, the terms of which were quite clear. The allegation that justices showed a disinclination to carry out the duties entrusted to them by this statute would engage the attention of the Home Secretary.

Brompton Cemetery.

In the House of Commons on Monday, Aug. 4th, in reply to Mr. Kimber, the Home Secretary said he was informed that there were 587 leaden coffins deposited above ground, and these were increased by about ten every year. The catacombs were daily visited, so that if anything were amiss, it would be immediately noticed. It was believed that the regulations now in force would prevent the cemetery becoming dangerous to health, and he was in consultation with the Office of Works with a view to adopting stringent regulations with regard to them which would remove all cause for apprehension.

Mortality in Indian Gaols.

In answer to Mr. Bradlaugh, Sir John Gorst said that in 1888 the death-rate in gaols was 44·7 for Bengal and 33·1 for the whole of India, the death-rate of the preceding year having been 35·6. Suggestions for diminishing the death-rate were now being considered by the Government of India.

Public Health Acts Amendment Bill.

An amendment moved by Mr. J. R. Kelly, providing that, before a road is taken over by a local authority it should be properly metalled and sewered, was, after discussion, lost, and the Bill was read a third time.

Banstead Lunatic Asylum.

In answer to Mr. Baumann, Mr. Ritchie said that his attention had been drawn to a passage in the report of the Commissioners relating to this asylum, but he saw no ground for proposing that the duty of visiting the asylums in the county of London should be taken away from the London County Council.

Vaccination in the Doncaster Union.

In reply to Mr. Labouchere, Mr. Ritchie said that inquiry into alleged irregularities in the performance of public vaccination in Doncaster Union had been made, and there could be no doubt that the public vaccinator, had arranged that children should be vaccinated by an unqualified person. In some cases, although payment was made by parents, the vaccination fees were charged to the guardians. The Board had communicated with the guardians, requesting them to determine the contract, and had intimated to them that it would devolve upon them to consider the action to be taken in regard to the cases in which vaccination fees had been improperly charged.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

AMBLER, RICHARD, L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Ampthill District of the Ampthill Union, vice Slinn, resigned.

BARBER, ALEX., L.R.C.S. Irel., has been appointed Medical Officer of the Hillgrove Hospital and the Hillgrove United Medical Association, New South Wales.

BASSETT, W. F. P., M.B., M.S. Edin., M.R.C.S., has been appointed Honorary Medical Officer of the Bathurst Hospital, New South Wales.

BEATON, R. M., M.B., C.M. Aberd., has been appointed District Medical Officer for St. Pancras.

BLAMEY, JAS., M.R.C.S., has been appointed Medical Officer for the Perran-ar-Worthal District of the Falmouth Union.

CURWEN, ELIOT, M.A., M.B., B.C. Camb., M.R.C.S., L.R.C.P. Lond., late Senior Dresser, has been appointed House Physician to the London Hospital.

DIXSON, T., M.B., M.S. Edin., has been appointed Honorary Consulting Surgeon to the Sydney Hospital, New South Wales.

EDMUNDS, D. T., L.R.C.P. Edin., M.R.C.S., has been appointed Honorary Medical Officer of the Bathurst Hospital, New South Wales.

GIBSON, J., M.D., M.B. Edin., has been appointed Honorary Ophthalmic Surgeon to the Dunwich Benevolent Asylum, Queensland.

GRACE, W. G., L.R.C.P. Edin., M.R.C.S., has been appointed Public Vaccinator for St. Philips, Barton Regis.

HUNTER, R., L.R.C.P., L.R.C.S. Edin., has been appointed Resident Surgeon to the Mount Morgan Hospital, Queensland.

INNES, F. W., M.D. Edin., L.R.C.S., has been appointed a member of the Napier Medical Board, New Zealand, vice A. C. Preston.

JONES, W. R., L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer and Public Vaccinator for the Second District of the Halstead Union.

KELLETT, ROBT. G., L.R.C.S. Irel., has been reappointed Medical Officer for the Second Division and Public Vaccinator for the First and Second Divisions of No. 1 District of the Halstead Union.

KIRKLAND, HUGH, M.B., M.S. Glas., has been appointed Honorary Medical Officer of the Bathurst Hospital, New South Wales.

MILNE, ALEX. C., L.R.C.P., L.R.C.S. Edin., has been appointed Public Vaccinator for the Districts of Woodville and Danevirke, New Zealand.

PHILIP, JAMES P., M.B., C.M., D.P.H. Aberd., has been appointed Visiting Surgeon to the Newcastle-on-Tyne Dispensary.

POWERS, C. H., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Surgeon to the Cumberland Infirmary, Carlisle.

RIGBY, JOHN W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Second Chorley and Coppul District of the Chorley Union.

ROWBOTHAM, A. J., M.R.C.S., has been appointed Medical Officer for the Dunham District of the East Retford Union.

SMITH, H. G., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Stowmarket Urban Sanitary District of the Stow Union.

SMITH, OTTO W., M.D. Edin., has been appointed Public Vaccinator in South Australia.

TAYLOR, JOHN W., M.D. St. And., M.R.C.S., has been appointed Medical Officer of Health for the North Riding of Yorkshire.

WILSON, DAVID, M.B., C.M. Glasg., has been appointed Medical Officer for the Birtley District of the Chester-le-Street Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

CHILDREN'S HOSPITAL AND DISPENSARY, Manchester.—Medical Officer. Salary £180 per annum. (Apply to the Chairman of the Medical Board, Children's Dispensary, Gartside-street, Manchester.)

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House Physician for six months. No salary, but board and residence and allowance for washing provided. (Apply to the Secretary, 24, Finsbury-circus, E.C.)

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—In-door Dispenser and Assistant to House Surgeon. No salary, but board, lodging, and washing provided.

MANCHESTER ROYAL EYE HOSPITAL.—House Surgeon. Salary £70 per annum, with residence, board, and washing.

RIPON DISPENSARY AND COTTAGE HOSPITAL.—Resident House Surgeon and Dispenser. Salary £60 per annum, with board and lodging.

TORBAY HOSPITAL AND PROVIDENT DISPENSARY, Torquay.—Junior House Surgeon and Dispenser. Board, lodging, and attendance (wine, spirits, beer, and washing excepted) provided, together with fees from such pupils (if any) in dispensing as the Weekly Board may approve. He will also be one of the two Medical Officers of the Provident Dispensary. Salary £80 per annum.

WANTAGE UNION.—Medical Officer for the Brightwalton District of the Union. Salary £40 per annum, with the extra fees allowed by the Local Government Board orders. The person elected, who must reside in the district, will be appointed Public Vaccinator for the District, and may be appointed a Medical Officer of Health for the Union, at a salary of £20 per annum. (Apply to the Clerk of the Guardians, Wantage.)

Births, Marriages, and Deaths.

BIRTHS.

BARNETT.—On July 31st, at Burway House, Church Stretton, Salop, the wife of Horatio Barnett, M.B., of a son.

BINNIE.—On Aug. 4th, at Meadowfield House, Brandon, co. Durham, the wife of R. M. G. Binnie, M.D., C.M., of a daughter.

BULL.—On Aug. 3rd, at St. Oswald's House, Stony Stratford, Bucks, the wife of William H. Bull, F.R.C.S., of a son.

GAINER.—On July 28th, at Thrapston, Northamptonshire, the wife of J. W. Gainer, M.B. & C.M. Edin., of a daughter.

GROSS.—On Aug. 2nd, at South Side, Clapham-common, S.W., the wife of Asher Gross, L.R.C.P., M.R.C.S., of a son.

HUNT.—On July 30th, at The Poplars, Ockbrook, Derbyshire, the wife of J. Aspinall Hunt, L.R.C.P., M.R.C.S., of a daughter.

MARTIN.—On July 3rd, at Ootacamund, Madras, the wife of Surgeon-Major P. R. Martin, M.D., I.M.D., of a son.

O'REILLY.—On July 30th, at Thurnby, Guildford, the wife of Surgeon-Major J. O'Reilly, M.B., of a son.

REILLY.—On July 27th, at Leamington Villas, Belmont-road, Lewisham, the wife of Surgeon E. W. Reilly, I.M.D., Akola, Berar, India, of a son.

STYAN.—On July 31st, at Chapel-place, Ramsgate, the wife of T. G. Styan, M.A., M.D. Cantab., of a daughter.

VINEY.—On July 30th, at Harcourts, Chertsey, the wife of J. Ernest Viney, M.D., of a daughter.

MARRIAGES.

BARRS—NELSON.—On July 31st, at the Parish Church of Leeds, by the Rev. E. S. Talbot, D.D., Vicar of Leeds, assisted by the Rev. T. H. May, Rector of Heswall, Cheshire, brother-in-law of the bride, Alfred George Barrs, M.D., of 22, Park-place, Leeds, to Alice Bywater, youngest daughter of Henry Nelson, J.P., St. John's Cottage, Leeds.

BOND—SIMPSON.—On Aug. 7th, at Willey, Warwickshire, by the Rev. R. H. Price, M.A., Rector of Willey, assisted by the Rev. S. Godber, M.A., Vicar of St. Andrew's, Leicester, Charles J. Bond, F.R.C.S., of Leicester, to Edith, eldest daughter of Geo. Simpson, Esq., Bittesby, Lutterworth.

BROWNE—SCURFIELD.—On July 31st, at West Wickham, Kent, Oswald Auchinleck Browne, M.A., M.B. Cantab., M.R.C.P., youngest son of the late Octavius Browne, of Courtlands, Devon, to Alice Mary, third daughter of the Rev. Canon Tinling.

JAMES—PHILLIPS.—On Aug. 5th, at Emmanuel Church, Forest Gate, by the Rev. J. Elphick, Coram James, M.R.C.S., L.R.C.P., of 1, Welbeck-street, W., to Kate Elizabeth, eldest daughter of Thomas J. Phillips, of Forest Gate.

POWELL—IRVING.—On May 22nd, at Christ Church, South Yarra, Melbourne, Victoria, Dr. Henry Fitz Gerald Powell, son of the late Rev. Edward Powell, of Ballinasloe, co. Galway, to Francis Irving, eldest daughter of the Hon. W. J. Winter Irving, of Tirrengower Park, Victoria.

THORNTON—BLACKWOOD.—On Aug. 2nd, at St. Paul's Church, Shipley, Yorks., by the Rev. W. G. Howard, Edward Thornton, M.B., B.C. Cantab., to Marion (Minnie), fourth daughter of the late Wm. Blackwood, Peebles, N.B.

DEATHS.

CLABBURN.—On July 19th, suddenly, at Chilcas, Argentine Republic, Tom George Clabburn, M.R.C.S., L.R.C.P., late of Chiswick, eldest son of Mrs. Clabburn, of Lamas Hall, Norfolk, and of the late Thomas Clabburn, aged 37.

DIXSON.—On Aug. 2nd, at Cragmore, Wye, Kent, John East Dixson, M.R.C.S., formerly of Deal, in his 86th year.

DONAHOO.—On Aug. 4th, at his residence, 135, Kennington-road, S.E., of pleuro-pneumonia, after two days' illness, Thomas Malcolmson Donahoo, M.R.C.S., L.S.A., L.M. Lond.; for nearly fifty years in practice in South London. Deeply regretted by his family, friends, and numerous patients.

HANNAN.—On Aug. 6th, at 89, Camden-road, N.W., Harriet Mary, the dearly loved wife of Francis J. Hannan, M.D. Univ. Dub., deeply lamented.

KERR.—At 20, Castle-street, Dumfries, William Smith Kerr, M.D. Glas., aged 55.

MUIRHEAD.—On July 31st, at Busyhill, Cambuslang, Lanarkshire, Henry Muirhead, M.D., LL.D., and L.F.P.S. Glasg., aged 76.

WALKER.—On Aug. 1st, at his residence, Plasyndre, Corwen, Merionethshire, James Richards Walker, Surgeon, in the 67th year of his age.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Aug. 7th, 1890.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Aug. 1	29·92	W.	67	63	126	80	63	..	Cloudy
,, 2	29·96	W.	61	57	104	71	55	..	Cloudy
,, 3	30·19	W.	62	57	114	77	55	07	Cloudy
,, 4	30·21	N.W.	66	60	110	79	59	..	Cloudy
,, 5	30·22	W.	62	59	118	84	59	..	Hazy
,, 6	30·11	W.	63	60	103	80	58	..	Hazy
,, 7	30·19	N.E.	60	59	81	68	59	..	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

We cannot undertake to return MSS. not used.

THE FEE FOR NOTIFICATION.

Dubitans.—The words of the Act are: "The local authority shall pay a fee of two shillings and sixpence to any medical practitioner if the case occurs in his private practice, and one shilling if the case occurs in his practice as medical officer of any public body or institution." We are not aware that any legal definition has been given to these latter words; but, in our opinion, they should not be applied to club cases, which, in our judgment, are essentially private cases, unlike the cases of a hospital or under the Poor Law.

J. R. W.—We think that, under the circumstances, it would not be advisable to send in a claim.

Mr. G. B. Baker is referred to a general notice at the head of this column.

CONCEALMENT OF INFECTIOUS DISEASE.

To the Editors of THE LANCET.

SIRS,—So far notification does not seem to have done much towards reducing the number of scarlatina cases in London; and when one knows the concealment of infectious disease that takes place, it is not astonishing. I will give two or three cases that have been brought to my notice during the last two or three months.

In one instance some poor children were found by a medical man playing with others while in a state of desquamation. They had had no professional man to attend upon them during their illness, and the parents pleaded ignorance as to the nature of the malady. In another case a medical man called to attend upon a case of confinement found four children desquamating, and in this case there had been previously no medical attendance. In another, a doctor was called to see the child of a shopkeeper, and was told there had been scarlatina in the house a month or so before, but no one had seen the cases professionally, as the parents did not wish any bother to be made.

It is not astonishing, with such facts presented to one's notice, that scarlatina does not decrease; though I believe, if a thorough house-to-house inspection were made and all deficiencies corrected, a decrease would soon take place. Now we are one and all of us anxious to know what notification as at present carried out does effect (what it ought to effect is quite a different matter); and I would suggest that every medical officer of health should state in his report how many houses have been inspected, how many have been found defective, how many of the defects have been made good, and in how many cases the correction of sanitary defects resulted from notification. Some people are wishing notification to become extended to the whole kingdom; but if this were carried out, comparison between the results of notification and non-notification would become impossible. If the benefits resulting from notification as at present carried out are as great as its advocates assert, then the towns where it has been adopted ought to show a much lower death-rate than those in which it does not exist.

I am, Sirs, your obedient servant,

Surbiton, July, 1890. F. P. ATKINSON, M.D.

THE BRITISH MEDICAL ASSOCIATION MEETING AND NEWSPAPER "GOSSIP."

THE following paragraph is from the *Express and Star* of Wolverhampton:—

> "A deputation from the Medical Society, which has been in session in Birmingham during the week, visited the Wolverhampton and District Hospital for Women, in Chapel Ash, on Thursday. The object was to see a patient who had, some weeks since, gone through two remarkable operations for what is known as abdominal gestation, which had attained the full period. Both operations, which were conducted by Mr. John W. Taylor, F.R.C.S., of Birmingham, have been wonderfully successful, and mother and child are progressing most favourably. The deputation consisted of Herbert W. White, L.R.C.P.E.S., of Bradford; R. C. Bennington, M.B., and L. R. Morrison, F.R.C.S., of Newcastle; S. Fielden, M.D., of Shilston; A. T. Goodwin, M.D., of Liverpool; and others. They were attended by Mr. F. W. Taylor, Dr. John A. Lycett, Dr. Charles Smith, Rev. S. C. Adam, Mr. J. L. Gibbons, and the Secretary of the Hospital."

It is not quite clear whether by the "Medical Society" is meant the British Medical Association, but it seems so. It may be safely assumed that such "gossip" is more painful to Mr. Taylor than to any other member of the profession. All the same, it is very unsatisfactory, and ought to be denounced.

E. M. S.—For those who are not graduates of an English university the diplomas in Public Health given by the Conjoint Board of Physicians and Surgeons in London every January and July, and by the University of Cambridge every October, are most commonly sought for. Both examinations are open to all registered medical practitioners. As yet no public health laboratories have been approved for the purposes of these examinations; but several medical schools in the metropolis intend to organise a complete course in the subject, and we believe that those established by St. Bartholomew's, St. Thomas's, University, and Guy's Hospitals will be shortly announced.

Dr. R. Bell.—We do not think it advisable to publish the correspondence forwarded to us.

F.R.C.S.—Charteris (Churchill) or Carter (Lewis); Savage (Cassell).

SANITATION AT MANCHESTER.

To the Editors of THE LANCET.

SIRS,—The paragraph in the last number of THE LANCET on the sanitary condition of Manchester cannot fail to draw public attention to the fact that even in such a leading city as Manchester the sewage problem has not yet been solved as it ought to be. The idea of complaining that sewage is a nuisance, that the effluvium of it is pernicious to health, and then by ventilation diffusing that effluvium into the atmosphere of streets and houses for susceptible people to breathe, is so contrary to every sound basis of thought on which to act that astonishment at the seeming mistake becomes intense. Having been accustomed for many years to study and experiment on the sewage question, its character, and the obvious use designed for it by nature, and man's necessity, I have come to the conclusion that what is called ventilation of sewers is a great error, and that the right place for sewer gas is the sewer. Further, that with a right method of draining and disposal of sewage it would be impossible for sewage gas to be formed. Therefore, if there is nothing to get rid of, ventilation is useless.

I fear to ask too much of your space on one particular topic, though I do not think you could apply that space to a much better national purpose than to show the absurdity of the present mode of draining and throwing away that which is money's worth and valuable to land, and the benefit that could come from spreading knowledge of another method based on the indisputable principles of science and truth.

I am, Sirs, yours faithfully,

Cromwell-grove, W. W. HEMPSON DENHAM.

"THE STING OF THE HONEY BEE."

To the Editors of THE LANCET.

SIRS,—Your correspondent on the above subject seems to place implicit faith in the repeated inoculation of the poison from bee stings eventually exempting the attacked from all pain when stung. I cannot say that I find this my experience. I think that a great deal depends upon the health of the person stung, the time of year, how the sting is extracted, and the treatment after extraction. I always suffer from stings received during the cold weather, such as early spring or late autumn; but those received during the summer months take no effect upon me. In extracting I push the sting from the wound, so as not to squeeze the poison sac, and always wash my hands after in warm water. If the number of stings received qualifies one for the privilege of exemption from pain, I think it is nearly my due.—Yours truly,

Wandsworth, July 28th, 1890. A BEE-KEEPER.

THE BIRMINGHAM MEETING.

To the Editors of THE LANCET.

SIRS,—The remarks reported on page 248 (THE LANCET, Aug. 2nd) ascribed to Mr. J. W. Brown (Belfast) were made by

Your obedient servant,

Adam-street, Adelphi, W.C., Aug. 5th, 1890. GEORGE BROWN.

SANATORIA IN HOLLAND FOR PHTHISICAL PATIENTS.

DR. WYNHOFF has been speaking in favour of the erection of sanatoria in Holland where phthisical patients may be treated by exposure all day to fresh pure air, but shielded from the wind, so that the lungs may be exercised as much as possible and the appetite increased. He does not recommend that phthisical patients in whom there is any hope of checking the progress of the disease should be sent to warm climates.

J. H. N.—Our correspondent will find no difficulty in obtaining admission to the hospitals and medical schools of St. Petersburg and Moscow. In St. Petersburg the Medical Academy is not connected with the University, but with the War Department. Of course at this time of year most of the professors are away, but a visiting card sent in to the "Ordinator" (*chef de clinique*) at any of the hospitals, of which there are a great many in both cities, will always ensure a courteous welcome.

F. A. B.—We are not acquainted with any comprehensive English work on the History of Medicine later than that of Dunglison (1872). The "Lehrbuch der Geschichte der Medicin" of the late Prof. Haeser (Jena) is admittedly one of the best works of this class. The third edition was published in 1882, and a briefer work founded on the above was also produced by Prof. Haeser.

Mr. F. G. Wallace.—We have no recollection of the publication of a review such as our correspondent vaguely describes.

London Medical Student.—The grievance mentioned has been frequently pointed out.

Mr. W. W. Morgan.—The matter shall have consideration.

THE TREATMENT OF THE POOR.

To the Editors of THE LANCET.

SIRS,—One of the burning questions of the day is how the poor should be treated so as to encourage providence and discourage pauperism. Will you, therefore, allow this letter to appear in THE LANCET, to elicit suggestions for the guidance of a junior member of the profession, who has a good many of the poorer class under his care?

I practise in a town of about 5000 inhabitants, in an agricultural district. There is a so-called dispensary, to which all the doctors in the town are medical officers, and the patients are seen either at our surgeries or at their own homes. There is no public medical institution in the town, the nearest hospital being about six miles away. Members are elected to this dispensary at quarterly meetings, and are supposed to be excluded if their income exceeds 25*s.* a week. The fees they pay are—Each single person, 6*d.* per month; man, wife, and children under thirteen years, 1*s.* per month; man and wife, 9*d.* per month; and for this they are entitled to visits at home, consultations in the surgery, and medicine, while confinements are attended for 15*s.*, 7*s.* 6*d.* of which is paid by the dispensary and 7*s.* 6*d.* by the member. Each member is allowed to select the doctor by whom he wishes to be attended, and there are about 200, exclusive of children, who have selected me, while I attend about fifty cases of midwifery, and for this I receive between £50 and £60 a year.

Now, for my part, I feel that the work in connexion with this dispensary is much too hard for the remuneration, necessitating, as it does, sometimes eight or ten visits a day, some of which are five miles away, and it is with the hope of obtaining suggestions from others similarly situated that I trouble you with this letter. I would resign the appointment altogether, for I have ample without it, but I feel that each one should do what he can to benefit those who may be but scantily endowed with this world's goods. I shall be grateful for any suggestions, but I think the following are the chief points: 1. Are the fees adequate? 2. Should children, who as a rule require more treatment than adults, be included with so little increase in the fee? 3. What limit of distance should be enforced? 4. Would it not be better to employ a midwife to attend all natural cases of labour, and any professional assistance be paid for on a higher scale? 5. Can this dispensary practice be considered unprofessional? 6. Can any other method be suggested?

I must apologise for the length of this letter, but I believe the subject to be one of interest to many others besides myself.

I am, Sirs, faithfully yours,

July 29th, 1890. A JUNIOR M.D.

"CHRONIC 'BILIOUS ATTACKS.'"

To the Editors of THE LANCET.

SIRS,—In a case of migraine similar to that detailed by "A Ten Years' Subscriber" the following prescription gave prompt relief, and might, I think, be tried with advantage:—℞ Pot. brom., ʒ ii.; antipyrin, ʒ iss.; liq. bismuth. et am. cit., ℥ i.; tr. card. co., ℥ ss.; aq. ad ℥ viii. Two tablespoonfuls when the attack comes on, to be repeated every two hours till relief is obtained.

I am, Sirs, yours faithfully,

August, 1890. OUTIS.

"CHESS."

To the Editors of THE LANCET.

SIRS,—It is true, as Mr. Law states in his letter in your last issue, that there are few chess clubs suitable for medical men. But the British Chess Club, 37, King-street, Covent-garden, is admirable in many respects. There is evening as well as morning play. A number of medical men are members.—I am, Sirs, yours faithfully,

August 5th, 1890. STEPHEN SMITH, L.S.A.

THE L.S.A. QUALIFICATION.

To the Editors of THE LANCET.

SIRS,—At this time, when the annual circular from the Medical Directory is in the hands of all practitioners, permit me to urge upon the new licentiates of the Society of Apothecaries of London the importance of requesting that the description "Dipl. Med. Chir. et Obstet." be added to the letters L.S.A. in the Directory. Only by this means can we bring home to the minds of the public and the bulk of the profession the fact that we are as fully qualified for the practice of our profession as the holders of the high-sounding titles of the English, Irish, and Scottish Conjoint Boards. Our right to this description is set forth on page 88 of the Medical Register, 1890, as follows:—"All persons whose registration (under whatever diploma or diplomas) is dated after June 30th, 1887, are persons legally qualified for the practice of medicine, surgery, and midwifery." If we do not emphasise this fact it is our own fault, and we shall continue to be referred to as "only L.S.A.'s."

I am, Sirs, yours truly,

August 4th, 1890. A. R. W.

*** It is very natural that the holders of the Apothecaries' licence, in its new form, which is a complete qualification in the three legal branches of the profession, should wish to have some fuller title, and, we will add, some other title. To be satisfactory, this should be procured by legislation. The note in the Medical Register scarcely justifies the use of it which our correspondent recommends. The addition he advises reads like an additional title. It is better for the present to be content with the legal words.—ED. L.

Dr. W. Wallace (Rugby).—The report of the case of pemphigus appeared in THE LANCET of Feb. 22nd last, p. 400.

THE R. H. S. CARPENTER MEMORIAL FUND.

To the Editors of THE LANCET.

SIRS,—Since your issue of July 26th, in which you kindly permitted me to announce the receipt of £43 5*s.*, I have received the following additional subscriptions:—Miss Whitfield (per Mr. Nelson Hardy), £2 2*s.*; Dr. W. V. Lush, £1 1*s.*; Mr. H. D. Pedley, £1 1*s.*; Mr. A. Kershaw, 10*s.* 6*d.*

I am, Sirs, yours faithfully,

JOHN PAGE HENTSCH.

201, Southampton-street, Camberwell, S.E., August, 1890.

ERRATUM.—In Dr. Dudgeon's letter published last week, p. 257, second col., line 18, for "reparation" read *refraction*.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Norman Kerr, London; Dr. Mapother, London; Dr. Dudgeon; Dr. Seymour Taylor, London; Sir T. Longmore, Woolstone; Dr. Yellowlees, Glasgow; Dr. Money, London; Mr. L. Humphry, Cambridge; Mr. Mark Judge, London; Dr. Thomas, Glasgow; Mr. W. Pye; Dr. J. W. Allan, Glasgow; Mr. R. Weaver, London; Mr. G. Lawson, London; Drs. W. & B. Hoffmeister; Mr. W. W. Morgan; Messrs. Southall and Barclay, Birmingham; Dr. T. D. Harries; Messrs. Brooks, Peel, and Co., London; Dr. Keyworth, Southport; Messrs. White, Druce, and Co., London; Dr. Squire, London; Dr. Reid, Stafford; Mr. P. Murray Kerr, Dumfries; Mr. P. Pope, Broadmoor; Messrs. J. C. P. Hotz and Son, London; Mr. Engelbach, Moreton-Hampstead; Messrs. Cowley and Co., Upton-on-Severn; Mr. J. D. Staple, Bristol; Messrs. Eason and Son, Dublin; Mr. F. W. Cory, Bournemouth; Messrs. Bonthron and Co.; Mr. S. Smith, London; Dr. Claremont, Southsea; Dr. More Madden; Mr. Hentsch, London; Mr. Laffan, Cashel; Messrs. Squire and Sons, London; Mr. G. S. Johnson, London; Messrs. Krohne and Sesemann, London; Mr. Liston, Moreton-in-Marsh; Messrs. Bullock and Co., London; Mr. C. G. Lee, Liverpool; Mrs. M. H. Abel, New York; Dr. Thin, London; Mr. W. H. Denham, London; Dr. Hooper Kerr, Tottenham; Mr. H. W. Page, London; Messrs. Reynell and Son, London; Mr. P. S. Hutchinson, London; Messrs. Gallais and Co., London; Dr. A. J. Moss, Penarth; Dr. Hervé; Dr. Prout, Gold Coast; Dr. F. P. Atkinson; Mr. W. Bull, London; Messrs. Turner and Crosskey, Lewes; Dr. Bowie, Blantyre; Mr. Girdlestone, Harborne; Mr. D'A. B. Carter, Shipley; Dr. Lush, Weymouth; Dr. A. J. Smith, Dublin; Dr. A. C. Bernays, Berlin; Mr. J. C. Shepherd, Ambleside; Mr. Lamond, Glasgow; Mr. Dowie, Edinburgh; Mr. Moseley, Hastings; Mr. Godfrey, Jersey; Mr. Wraith, Darwen; Mr. Brice, Notts; Mr. S. Roberts, Belfast; Mr. Ockwell, Edgware; Mr. Smith, Tredegar; Mr. J. Hicks, London; Dr. Bastian, London; Mr. White, Guildford; Mr. Paterson, Leeds; Mr. Schramm, London; Mr. Oliver, Manchester; Mr. Williams, Bristol; Mr. Vasey, Dover; Mr. Taylor, Notts; Mr. Field, London; Mr. Harley, Edinburgh; Rev. S. Aubyn, co. Wexford; Mr. Lloyd, Chirk; Mr. Jones, Bristol; Messrs. Jarrold and Sons, Great Yarmouth; Mrs. Needes, London; Messrs. Allen and Hanburys, London; Mr. R. W. Roberts, Wrexham; Messrs. Orridge and Co., London; Mr. Ryan, London; Messrs. Brückner, Lampe, and Co., Berlin; Dr. Preston, Kidderminster; Messrs. W. H. Smith and Son, London; Dr. McLauchlan, Edgbaston; Messrs. Merryweather and Sons, London; Mr. Cottingham, Camden-square; Mrs. John Morgan, Stafford; Messrs. Walfords, Piccadilly; Mr. Heywood, Manchester; Mr. Love, Wolverhampton; Dr. Williams, Talgarth; Mr. C. Birchall, Liverpool; Mr. Hornibrook, London; Mr. Antikvariat, Stockholm; Mr. Champati, India; Arminius, Tewkesbury; R. C. S. S;

J. H. N.; Dubitans; A. St. C. B.; A. R. W.; W. H.; An Australian Subscriber; E. M. S.; L.S.A.; Certainty, London; American Bible Society Agency; Companion, Sheffield; J. E. F., London; London Medical Student; A. B., London; C. L. V., Manchester; Non Nobis Solum; A. M., London; Z., Hanwell; Royal Westminster Ophthalmic Hospital; M.D., Nottingham; Pupil, London; S. A., London; Morris Tube Co., London; J. C. W., London; P. P. P., London; Drogneria Universal, Paris; County Council, Sutherland.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Speirs, Cumberland; Mr. Tully, Hastings; Mr. Howard, Hitchin; Mr. Tyte, Minchinhampton; Mr. Holsworth, Leamington; Messrs. Robinson and Son, Chesterfield; M. Berthier, Paris; Messrs. Giles, Cuxon, and Co., Wednesbury; Dr. Corsham, Cirencester; Messrs. Richards and Co., London; Mr. Brockelbank, Islington; Mr. J. K. Murray, Cape Colony; Mr. Lawson, Wantage; Mr. Bell, Lancaster; Messrs. Bean and Co., Leeds; Mr. Sandford, Manchester; Messrs. Savory and Moore, London; Mr. C. Ritchie, Partick, N.B.; Messrs. Blondeau et Cie.; Mr. Thin, Edinburgh; Mr. Roberts, Ludlow; Messrs. Benson and Co., London; Mr. Orchard, Dublin; Messrs. Cooper and Co., South Kensington; Mr. Leader, London; Mr. W. Scott; Messrs. Brady and Martin, Newcastle-on-Tyne; Mr. Griffith, Cumberland; Dr. Maccall, Morecambe; Mrs. Graves, Anerley; Dr. Pierce, Denbigh; Mr. F. Nash, Portman-square; Dr. Kingsbury, Blackpool; Mr. Thornton, Shipley; Mr. Lerry, Oswestry; Dr. Brown, London; Dr. N. Davies, Glamorgan; Mr. Sorby, Hawkhurst; Mr. W. E. Williams, Monmouthshire; Dr. Osburne, Hythe; Mr. Nichols, Farnham; Mr. Simpson, Lutterworth; Mrs. Greenleaves, Bournemouth; Mr. Merck, Darmstadt; Mr. Bigg, London; Rev. D. Stone, Wallingford; Mr. Butlin, London; Mr. Davenport, London; Mr. Syms, Redcar; Dr. Peacock, Dudley; Dr. Barnett; Dr. Hanley, Africa; Mr. Philip, Newcastle-on-Tyne; Major Pead, Dulwich-grove; Dr. Wallace, Rugby; Mr. T. Town, Halifax; Mr. Griffiths, Cowbridge; Mr. Norton, Staplehurst; Dr. J. S. Reid, Cambridge; Mr. Towell, Everton; Messrs. Iles and Stradling, Watford; Mr. Edger, Hartlepool; Messrs. White and Co., London; Mr. Alford, Crewkerne; Dr. Hannan; Mr. Williams, Mon.; Mr. Power, London; Dr. Winckworth, Beds; Mr. Meier, Redhill; Mr. Bland, Nottingham; Mr. Dixey, Falmouth; Mr. Adams, London; S. M. T., London; M.R.C.S., London; Alpha, Manchester; G. O. M.; M. C., London; Surgeon, Yorks; Secretary, York County Hospital; M.D., co. Down; M.D., Brighton; West Riding Lunatic Asylum, Wakefield; M.D., Wimbledon; X. Y. Z., London; Queen's Hospital, Birmingham; Bristol Royal Infirmary; The Hamilton Association, London; W. E., London; Veritas, Chalford; Hackney Furnishing Co.; Medicus, London; B., Newsholme; Vaccine Lymph Association; Blenheim; Mater; Doctor, Paulton-square; *Midland Counties Herald*; W. W., London; Delta, Bath; Brighton, Hove, and Preston Dispensary; Medicus, Aberdare; D. A. V., London; Iota, London; M. C., Folkestone; Medicus, Peterborough.

NEWSPAPERS.—*Midland Evening News, Sheffield Independent, Glasgow Herald, Sussex Daily News, Evening Express (Liverpool), Scotsman, Manchester Guardian, City Press, Yorkshire Post, Weekly Free Press and Aberdeen Herald, Hertfordshire Mercury, Surrey Advertiser, West Middlesex Standard, Builder, Kilkenny Journal, Local Government Chronicle, Windsor and Eton Gazette, Sunday Times, Bristol Mercury, Broad Arrow, Guy's Hospital Gazette, Bradford Evening Telegraph, Public Opinion, Spectator, Windsor and Eton Express, Sheffield Daily Telegraph, Architect, Chemist and Druggist, Reading Mercury, Metropolitan, Law Journal, Liverpool Daily Post, Leeds Mercury, Mining Journal, Saturday Review, Home News, Tablet, Admiralty Gazette, West Middlesex Advertiser, Pharmaceutical Journal, Southern Times and Dorset County Herald, Morning Advertiser, Manchester Examiner, The Child's Guardian, Liverpool Courier, Freeman's Journal, United Service Gazette, Galignani's Messenger, Scottish Leader, Citizen, The Australian (Brisbane), The Digger's News (Johannesburg), Nottingham Daily Guardian, Melbourne Argus, Liverpool Mercury, Agricultural Economist, Dundee Advertiser, Bath Chronicle, Kentish Gazette, The Guardian, Sheffield Independent*, &c., have been received.

Medical Diary for the ensuing Week.

Monday, August 11.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

Tuesday, August 12.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electrotherapeutics, same day, 2 P.M.

Wednesday, August 13.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M Surgical Consultations, Thursday, 1.30 P.M.

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ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

Thursday, August 14.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

Friday, August 15.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, August 16.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

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